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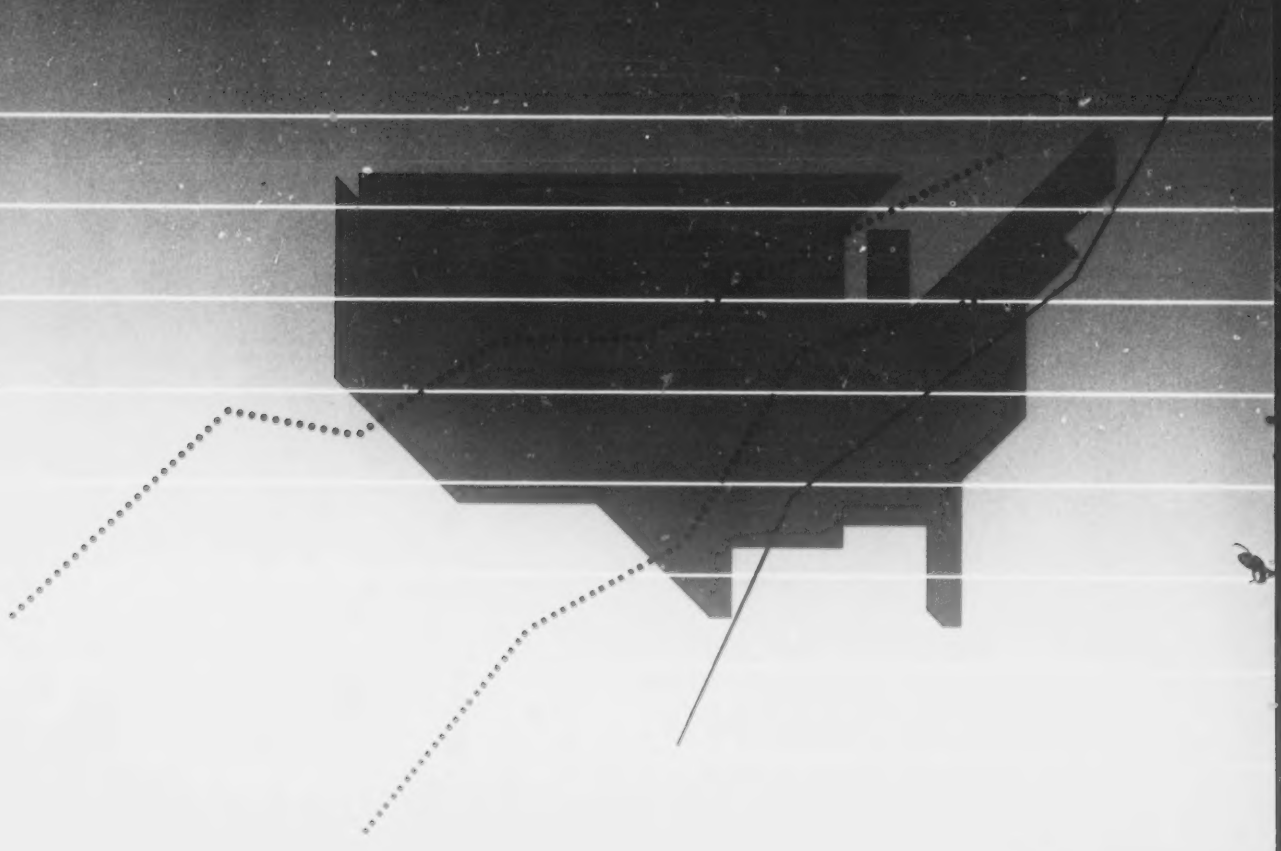
Socioeconomic Characteristics of Medical Practice 1989



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AMA Center for
Health Policy Research

Socioeconomic Characteristics of Medical Practice 1989

Edited by
Martin L. Gonzalez
David W. Emmons

The information contained in this volume is from the AMA Socioeconomic Monitoring System. The AMA Center for Health Policy Research directs the Socioeconomic Monitoring System in cooperation with the AMA Division of Survey and Data Resources.

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Foreword

The health care environment, especially as it relates to physicians, underwent major changes in the 1980s. Increases in professional liability costs, rising physician supply, and efforts to control health care costs all had an impact on physician practice patterns. The government's efforts to control federal health care expenditures brought about the Medicare fee freeze, the Participation Program, and Maximum Actual Allowable Charges. These factors also had an influence on physician practice patterns.

The Center for Health Policy Research has attempted to follow the impact of these changes by tracking key indicators of physician practice over time. The results of our efforts have been made available to the public in *Socioeconomic Characteristics of Medical Practice*.

This year's edition contains four new articles; the articles examine medical malpractice, physician income trends, physician earnings with respect to employment status and experience, and physician ownership of health care facilities. The articles are followed by detailed tabulations of statistics on a broad range of physicians' practice characteristics, including income, expenses, fees, and a number of specific practice activities. In addition, trend information is provided so that the reader can examine how these characteristics have changed over time.

The introduction contained in the book will assist readers in interpreting the book's information. It provides definitions for the statistical terms used and gives examples of how best to utilize the information presented in the tables. Users are encouraged to avail themselves of the information in the introduction and the appendices when interpreting the reported findings.

A program of the magnitude of the Socioeconomic Monitoring System (SMS) requires major commitment and substantial effort from many individuals. I would like to express my gratitude to all who have contributed to SMS and this edition of *Socioeconomic Characteristics of Medical Practice*. Special thanks are due David W. Emmons, Ph.D., director of the Office of Socioeconomic Research Information, who had major responsibility for oversight of this publication, and Norbert W. Budde, Ph.D., director of the Division of Survey and Data Resources, whose division has cooperated with the Center for Health Policy Research in many of the activities relating to SMS.

James F. Rodgers, Ph.D
Director
Center for Health Policy Research

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Introduction: How to Use Socioeconomic Characteristics of Medical Practice

Socioeconomic Characteristics of Medical Practice is an annual volume with studies and statistics based on information collected by the AMA Socioeconomic Monitoring System (SMS). This volume maintains the tradition of the AMA, established in the past by the series *Profile of Medical Practice,* as a primary source of baseline data on socioeconomic aspects of medicine.

This volume is primarily devoted to providing detailed information on medical practice characteristics in 1988 based on data collected by SMS surveys. However, selected trends are shown for characteristics for which similar data were collected in the past on earlier SMS surveys.

The information in this volume is intended for use by a variety of individuals who come into contact with medical practice issues from different perspectives. Physicians might use this information in assessing the likely impact of such practice changes as relocating or joining a group practice on their earnings, patient volume, and practice costs. Medical practice consultants may use this information to improve their ability to assess a client's performance and suggest areas for improvement. Hospital administrators may find the volume useful in determining appropriate compensation levels and hours for their medical staff.

Definition of Statistics

A statistic is simply a summary measure based on survey results to describe an attribute of the distribution of a characteristic across a population; in this instance a population of physicians. This volume provides a mean and standard error for each characteristic presented in the tables. Median net income and expense figures are also presented, as are figures for net income at the 25th and 75th percentiles.

Although the mean and median are more commonly employed statistics, the information on the 25th and 75th percentiles of each characteristic is included to emphasize how characteristics vary across groups within the physician population. In some instances, the information on the 25th and 75th percentiles might be more typical of the experience of subgroups of physicians than either the mean or median.

It must be kept in mind that the statistics presented are only estimates of population characteristics derived from surveying a sample of physicians. This may cause characteristics of the full physician population to differ from information obtained from SMS survey results. For this reason, the results include measures that should be considered carefully in judging what degree of confidence to attribute to any inferences drawn from the SMS results.

This is especially true of the within-specialty breakdowns by census division (e.g., net income for surgeons in the New England Census Division), which appear in tables that present current year information only. These figures are often calculated with a small number of observations, although figures calculated with less than 20 observations are not printed. Small sample sizes often cause the figures to fluctuate from year to year—more from sampling error than from actual changes in the characteristic. Hence, the user should be cautious when extrapolating trends from this information. The standard error of the mean, which is defined

below, should be used to determine if year-to-year changes in these figures are statistically significant. The statistics presented for each characteristic and a brief discussion of how each may be used follows.

Mean (or Average)

The sample mean is an estimate of the average value of a characteristic for a given population. The mean is often referred to as a measure of "central tendency" for a characteristic because it tends to be located in the middle of the distribution of all possible values for the characteristic. However, it may neither be the most common nor a very typical value. For example, for many physician characteristics, a large share of physicians are concentrated in a range of lower possible values for the characteristic while a small share of physicians have extremely high values. An example of this type of characteristic is physician net income after expenses before taxes. For such characteristics, the mean will exceed the most common value and the values representative of the experience of typical physicians. In these instances, the median (as discussed below) may be a more appropriate measure to use for making some types of inferences.

If information were available on a characteristic from the entire population of physicians in a group, the mean would be computed as the sum of the values of the characteristic across the group divided by the number in that group. This approach would also be followed using sample information to obtain an estimate of the mean if the sample were perfectly representative of the entire group. However, an examination of SMS survey results indicates that, although the initial samples are representative of the underlying physician population, some physician groups are underrepresented and others overrepresented among those physicians who complete the survey. To alleviate the biases that would arise from this result, the estimates of the mean reported in this volume are weighted averages of survey responses. The weights give greater importance to information reported by groups of physicians who are underrepresented in the final survey sample in the calculation of the mean so that it provides a more accurate reflection of the population mean. A further discussion of the weighting procedure and computation methods appears in Appendix B.

Standard Error of the Mean

The standard error is used in assessing the reliability of the estimate of the mean based on sample information in drawing conclusions about the mean of a characteristic for the underlying population. Larger standard errors indicate that the sample mean is subject to greater possible error as a representation of the mean for the entire population.

Two factors directly affect the standard error. First, the standard error diminishes as the number of respondents increases. Second, the standard error will tend to be greater for characteristics with greater dispersion in the values in the population. This is because greater dispersion increases the chance that a single unusual value will be reflected in the sample information (sometimes called an "outlier"), which will have inordinate influence in the calculation of the mean. However, as the overall sample increases, the influence of any single response will diminish, so that outlier problems that may introduce error into the estimates of the means will diminish.

A common use of standard error estimates is in the construction of confidence intervals. Confidence intervals are used for making statements about the probability with which the mean for the population of a physician group falls within certain bounds. For a 95% confidence interval, the bounds are given by the mean estimate plus 1.96 times the standard error and the mean estimate minus 1.96 times the standard error. The mean for the population will fall within these bounds with a probability of 95%. For a 90% confidence interval, the bounds are given by the mean estimate plus and minus 1.64 times the standard error.

For example, the sample mean number of office visits per week per physician in 1988 was 79.2 and the standard error was approximately 1.1. This indicates that there was a 90% probability that the population mean was between 77.4 and 81.0 and a 95% probability that the population mean was between 77.0 and 80.1.

25th Percentile

The 25th percentile is the value of the characteristic larger than that experienced by 25% of a specified group and exceeded by the remaining three-fourths of that group.

Median (or 50th Percentile)

The 50th percentile is the value of the characteristic larger than that experienced by half of a group, but smaller or equal to that experienced by the other half. This is a measure of central tendency often used as an alternative to the mean because it provides a better representation of the typical experience of individuals in the population group. It is also less subject to the influence of outliers than the mean.

75th Percentile

This is the value of the characteristic larger than that occurring for 75% of the physician group, but equal to or exceeding that for the other 25%.

A series of appendices relating to the methodology of the SMS surveys, the SMS questionnaire, and definitions of variables reported in the tables are included at the end of the book. These appendices are designed to answer most questions about how information included in this volume is generated. We urge readers to avail themselves of this information in considering the results published elsewhere in the volume.

Socioeconomic Characteristics of Medical Practice 1989

Studies on the Socioeconomic Environment of Medicine

Medical Professional Liability Claims and Premiums, 1985-1988
by Eric J. Slora and Martin L. Gonzalez

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by Kurt D. Gillis and Richard J. Willke

Medical Professional Liability Claims and Premiums, 1985-1988

By Eric J. Slora and Martin L. Gonzalez

Medical professional liability remains an issue of great importance for physicians and policymakers. A comparison of physicians' claim experiences in 1987 and 1988 indicates moderation in measures of professional liability claim frequency as well as in average premiums. In this article, trends in claim frequency and cost of insurance premiums are examined. Specific findings of the analysis include the following:

- The average annual rate of professional liability claims was 6.4 per 100 physicians in 1988, as compared with 6.7 in 1987. Since 1985, the claims rate has declined at an average annual rate of 14.4%.
- The claims rate appeared to moderate across almost all specialties and geographic divisions between 1987 and 1988, as evidenced by the nonsignificant one-year changes observed. The lone exception was obstetrics/gynecology, which experienced an 88.8% increase in claim frequency, from 8.0 claims per 100 physicians in 1987 to 15.1 in 1988.
- Increases in average professional liability premiums also appeared to moderate between 1987 and 1988. Only one specialty—radiology—experienced a significant increase in premiums. Still, premiums have increased steadily over the three-year period studied. Since 1985, average professional liability premiums have increased at an average annual rate of 14.8% for all physicians.
- When adjusted for inflation, about one-seventh of increased revenues of the average self-employed physicians from 1982 to 1988 were used to pay for higher premiums. This suggests the important role of professional liability in contributing to increased expenditures on physician services.

The information included in this article is derived from 1983 to 1989 AMA Socioeconomic Monitoring System (SMS) core surveys of nonfederal patient care physicians, excluding residents. For purposes of this study, information reported by respondents to the surveys was weighted to correct for survey nonresponse. This may cause some information to differ from previously reported SMS surveys relating to medical professional liability.

Trends in Professional Liability Claims

A comparison of claims per 100 physicians in 1987 and 1988 (see Table 1) indicates that overall, claim frequency appears to have moderated. Claim frequency for all physicians was 6.4 claims per 100 physicians in 1988, as compared with 6.7 in 1987.

These results are consistent with the pattern of moderation and decline in claim frequency observed since 1985. Since that time, claims for all physicians have decreased at an average annual rate of 14.4%. A decline in the rate of claims was also reported over the same period by the St. Paul Fire and Marine Insurance Company (1989) among its physician policyholders.

Claim frequency appeared to moderate between 1987 and 1988 across almost all specialties and geographic areas studied, as evidenced by the nonsignificant one-year changes observed. The lone exception to this pattern was obstetrics/gynecology. Claims for obstetrician/ gynecologists increased significantly, jumping from 8.0 claims per 100 physicians in 1987 to 15.1 in 1988.

The 1987-1988 moderation in claim frequency is consistent with the three-year trend across special-

The authors are, respectively, Research Associate and Staff Associate in the AMA Center for Health Policy Research.

Table 1. **Annual Claims per 100 Physicians, by Specialty and Census Division, 1985-1988**

	1985	1986	1987	1988	Average Annual Rate of Change 1985-1988
All Physicians	10.2	9.2	6.7[a]	6.4[b]	–14.4%
Specialty					
General/Family Practice	5.7	7.6	5.7	6.2	2.8
Internal Medicine	6.2	5.5	4.5	4.3	–11.5
Surgery	16.8	15.8	12.7	10.2[b]	–15.3
Pediatrics	7.2	6.8	4.5	3.7	–19.9
Obstetrics/Gynecology	25.8	13.0[a]	8.0	15.1[a,b]	–16.4
Radiology	12.8	11.5	8.0	5.6[b]	–24.1
Psychiatry	2.9	4.5	1.6	0.6[b]	–40.9
Anesthesiology	7.5	8.7	4.6	4.0	–18.9
Pathology	3.3	1.9	4.9	3.6	2.9
Other	10.4	9.1	5.9	6.3	–15.4
Census Division					
New England	7.6	10.1	4.0	8.4	3.4
Middle Atlantic	13.9	12.7	7.8	7.1[b]	–20.1
East North Central	13.2	10.1	10.5	7.5[b]	–17.2
West North Central	9.6	8.6	3.9	4.0[b]	–25.3
South Atlantic	7.0	7.5	5.6	4.7	–12.4
East South Central	5.5	7.3	9.2	6.4	5.2
West South Central	12.4	8.6	6.3	10.4	–5.7
Mountain	6.2	9.0	4.1	5.0	–6.9
Pacific	9.3	7.5	5.4	4.4[b]	–22.1

Source: See text of article.
a. Change from previous year statistically significant at the p = .05 level.
b. Total 1985-1988 change statistically significant at the p = .05 level.

ties and geographic areas. Significant 1985-1988 declines occurred in four specialties—surgery, obstetrics/gynecology, radiology, and psychiatry—and in four census divisions—Middle Atlantic, East North Central, West North Central, and Pacific. Across the other specialties and census divisions, claim frequency appeared to moderate between 1985 and 1988.

In general, the results indicate a leveling off in the claims rate in contrast to the increases observed in the early- and mid-1980s. It is unclear if this trend will continue. Despite the moderation observed, the claims rate is still somewhat higher than it was prior to 1981. As reported by Gonzalez (1986), the average annual claims rate prior to 1981 was 3.2 claims per 100 physicians. However, caution should be exercised when comparing this figure to the figures reported in Table 1 because of a methodological change in the way the claims rate was calculated for 1985 and after.

The incidence of liability claims is not confined to a small proportion of the physician population. As Table 2 indicates, 37.2% of all physicians have incurred at least one claim during their careers. Over one-half of all physicians in obstetrics/gynecology have incurred at least one claim. Across census divisions, physicians in the West South Central, East North Central, and West North Central areas report the highest career percentage.

In 1988, 14.1% of obstetrician/gynecologists incurred a claim, the highest among specialties and a significant increase over the 6.7% reported for 1987. Across census divisions, physicians in the West

Table 2. **Percent of Physicians Incurring Claims Annually (1985-1988) and in Career, by Specialty and Census Division**

	Percent Incurring Claims Annually				Average Annual Rate of Change	Percent Incurring Claims in Career as of 1988
	1985	1986	1987	1988		
All Physicians	8.5%	7.6%	6.0%[a]	5.8%[b]	–12.0%	37.2%
Specialty						
General/Family Practice	5.5	6.3	5.1	5.7	1.2	36.5
Internal Medicine	5.4	4.8	4.3	3.8	–11.1	28.1
Surgery	13.6	12.3	11.0	8.8[b]	–13.5	49.3
Pediatrics	6.6	5.7	3.9	3.5	–19.1	30.7
Obstetrics/Gynecology	20.0	10.9[a]	6.7	14.1[a]	–11.0	59.8
Radiology	11.2	10.5	6.5	4.6[b]	–25.7	38.5
Psychiatry	2.9	4.1	1.6	0.6[b]	–40.9	17.4
Anesthesiology	7.5	8.2	4.2	4.0	–18.9	39.2
Pathology	3.3	1.9	4.9	3.6	2.9	22.1
Other	7.5	7.4	5.7	6.1	–6.7	37.7
Census Division						
New England	7.2	9.5	4.0[a]	7.3	0.5	31.0
Middle Atlantic	11.5	9.7	6.5[a]	6.5[b]	–17.3	39.8
East North Central	10.6	8.3	8.9	6.4[b]	–15.5	41.4
West North Central	7.2	7.8	3.5[a]	4.0	–17.8	41.0
South Atlantic	6.3	6.2	5.2	4.5	–10.6	30.0
East South Central	4.5	5.9	7.8	6.4	12.5	33.5
West South Central	10.4	7.8	6.1	8.7	–5.8	42.2
Mountain	5.2	7.5	4.1	4.6	–4.0	29.2
Pacific	8.0	6.2	5.2	4.1[b]	–20.0	39.4

Source: See text of article.
a. Change from previous year statistically significant at the p = .05 level.
b. Total 1985-1988 change statistically significant at the p = .05 level.

South Central region (8.7%) were most likely to have incurred a claim in 1988.

Trends in Professional Liability Premiums

Average professional liability insurance premiums paid by self-employed physicians from 1982 to 1988 are shown in Table 3. Premiums rose at an 18.3% annual rate during this period, increasing from $5,800 in 1982 to $15,900 in 1988. In contrast, the average annualized rate of inflation was 3.5% and total practice revenues increased by 7.4% annually over the same period.

The increase in premiums has been a major factor contributing to growth in expenditures on physicians' services. From 1982 to 1988, 15.4% of the average increase in revenues of self-employed physicians adjusted for inflation were devoted to higher premium expenses. The more rapid rate of increase in premiums relative to revenues has caused the share of revenues devoted to paying professional liability insurance premiums to increase from 3.1% in 1982 to 5.6% in 1988.

Table 4 presents detailed information on professional liability insurance premiums paid by self-employed physicians between 1985 and 1988. In contrast to the pattern of increases observed over the past several years, increases in average professional liability premiums appeared to moderate between 1987 and 1988. The average premium in

Table 3. **Average Professional Liability Insurance Premiums Paid and Total Practice Revenues of Self-Employed Physicians, 1982-1988**

	Insurance Premiums Paid[a]	Total Practice Revenues[a]	Premiums as Percent of Revenues
1982	$5.8	$186.0	3.1%
1983	6.9	199.3	3.5
1984	8.4	212.2	4.0
1985	10.5	226.8	4.6
1986	12.8	249.5	5.1
1987	15.0	269.9	5.6
1988	15.9	285.5	5.6
1988 Net of Inflation (i.e., in 1982 dollars)	13.0	232.7	5.6
Average Annual Percent Increase 1982-1988	18.3%	7.4%	—
1982-1988 Net of Inflation	14.4	3.8	—

Source: See text of article.
a. In thousands of dollars.

1988 was $15,900, a statistically nonsignificant change from the $15,000 average premium reported for 1987. Still, since 1985, premiums have increased at an average annual rate of 14.8% for all physicians.

Among specialties, there is some variation in average premium levels. These variations tend to reflect differences in claims rates. The correspondence, however, is not complete since premiums are affected by the severity of claims and other factors in addition to claims rates.

Specialists in obstetrics/gynecology paid, on average, the highest professional liability insurance premiums in 1988 ($35,300) while psychiatrists paid the lowest ($4,400). Only one of the specialties studied—radiology—experienced a significant premium increase over the most recent one-year period studied. Radiologists paid $12,400, on average, in 1988 as compared with $9,500 in 1987. Still, premiums in general are up significantly over 1985, with average annual increases ranging from 9.7% for anesthesiology to 25.5% for pediatrics.

Premiums also varied by geographical area, type of practice, location, and physician age. Table 40, located in the Detailed Statistics section, provides full breakdowns by these variables.

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St. Paul Fire and Marine Insurance Company. *Physicians' and Surgeons' Update: The St. Paul's 1989 Annual Report to Policyholders*. St. Paul, Minnesota, May 1989.

Table 4. **Average Professional Liability Premiums Paid by Self-Employed Physicians, 1985-1988**

	Average Premiums (in thousands of dollars)				Average Annual Rate of Change
	1985	1986	1987	1988	1985-1988
All Physicians	$10.5	$12.8[a]	$15.0[a]	$15.9[b]	14.8%
Specialty					
General/Family Practice	6.8	7.3	8.9	9.4[b]	11.4
Internal Medicine	5.8	7.1[a]	8.4[a]	9.0[b]	15.8
Surgery	16.6	21.3[a]	24.5[a]	26.5[b]	16.9
Pediatrics	4.7	6.3[a]	7.1	9.3[b]	25.5
Obstetrics/Gynecology	23.5	29.3[a]	35.3[a]	35.3[b]	14.5
Radiology	8.9	10.4	9.5	12.4[a,b]	11.7
Psychiatry	2.5	3.4[a]	3.8	4.4[b]	20.7
Anesthesiology	17.9	20.5[a]	22.9	23.6[b]	9.7
Pathology	3.1	4.4[a]	6.2[a]	4.9[b]	16.5
Other	6.0	8.5[a]	8.4	9.3[b]	15.7

Source: See text of article.
a. Change from previous year statistically significant at the p = .05 level.
b. Total 1985-1988 change statistically significant at the p = .05 level.

Physician Ownership of Health Care Facilities

by Anita J. Chawla and Sara L. Thran

New investment opportunities have been created as the market for health care services has responded to forces such as the introduction of incentives designed to control costs, the growth of outpatient facilities for procedures previously considered inpatient services, and innovation in medical technology. Many people, including physicians, have responded to these opportunities and invested in a variety of health care facilities. Recently, considerable attention has focused on the conflict of interest physicians face in referring patients for ancillary services to facilities in which they have an ownership interest.[1]

Like other investors, physicians receive supplementary income from their investments in health care facilities. For physicians, however, this financial opportunity creates an economic incentive to increase referrals to these facilities. Despite anecdotal evidence that instances of fraud and abuse have occurred, the extent to which inappropriate referrals take place has not been adequately documented.[2] Moreover, it is generally acknowledged that physician ownership of health care facilities can be an important factor in increasing access to health care and providing better quality of care. The balancing of these facets of physician investment in health care facilities poses a significant challenge for policymakers.

The Office of the Inspector General (OIG) of the Department of Health and Human Services (HHS), the General Accounting Office (GAO), and the Congressional Research Service (CRS) have investigated the nature and the extent of physician ownership of health facilities and patient referral. The results from the OIG and GAO studies were presented at congressional hearings in June 1989. The AMA recently collected information on this issue using the Socioeconomic Monitoring System (SMS) 1988 fall and 1989 core surveys of nonfederal patient care physicians, excluding residents. The 1988 survey was used to collect preliminary information on the extent of physician ownership and patient referral. In addition to providing information on the extent of ownership and patient referral for a larger sample, the 1989 survey obtained data on the number of facilities in which a physician has an ownership interest, form of ownership, number of other investors, amount of initial investment, determination of profit share, and reason for referral. The results from both surveys are summarized in this report.

Legislative Developments Relating to Self-Referrals

Federal legislative activity dealing with the issue of physician ownership of health care facilities and patient referral has been substantial. Federal anti-kickback laws, enacted in 1972 and amended in 1977, prohibit reimbursement to physicians for referral of Medicare or Medicaid patients. The Medicare and Medicaid Patient and Program Protection Act of 1987 requested that HHS develop guidelines to produce a "safe harbor" for physician investment. Safe harbors permit financial interests in facilities and patient referral under certain conditions. In January 1989, OIG outlined its proposed safe harbors. No final regulations have been issued. With a few exceptions, Medicare Catastrophic Coverage Act of 1988 prohibits physicians with an ownership interest in a provider of home intravenous therapy from referring Medicare patients to that provider.

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Table 1. **Physician Ownership of Health Care Facilities and Patient Referral,1988 and 1989**

	No Ownership Interest in Facility[a]		Own Facility and Refer Patients[a]		Own Facility and Do Not Refer Patients[a]	
	1988	1989	1988	1989	1988	1989
All Physicians	90.7%	91.7%	7.1%	6.0%	2.1%	2.3%
Specialty						
General/Family Practice	89.9	94.5	10.1	4.9	0.0	0.6
Medical Specialties	91.5	91.0	8.1	7.5	0.4	1.5
Surgical Specialties	87.9	88.4	9.4	9.3	2.7	2.3
Other Specialties	93.3	93.9	1.7	2.1	5.0	4.0
Location						
Arizona, California, Florida, Minnesota, Pennsylvania, Virginia, Washington or West Virginia	86.5	88.6	10.3	7.9	3.2	3.5
Other	92.3	93.0	6.0	5.2	1.7	1.8
Employment Status						
Employee	97.6	97.7	1.2	0.6	1.2	1.7
Self-Employed Solo Practice	89.9	90.9	9.1	7.1	1.0	2.0
Self-Employed Group Practice	86.4	87.3	9.6	9.7	4.0	3.0
Annual Income						
$150,000 or less	93.1	93.9	5.8	4.5	1.1	1.6
Greater than $150,000	84.7	86.0	9.9	10.7	5.4	3.3

Source: See text of article.
a. The 95% confidence intervals are conservatively estimated at +2.4% for 1988 and +1.5% for 1989.

In addition to these measures, the "Ethics in Patient Referrals Act" (HR 939) was introduced by Representative Stark in the 101st session of Congress.[3] The objective of this bill is to prohibit a physician, receiving Medicare reimbursement, from referring patients to health care facilities in which the physician or an immediate family member has an ownership interest.

Certain exceptions to this prohibition are provided. For example, one exception would permit radiologists, radiation therapy specialists, and pathologists to refer patients for supplementary services associated with their particular specialties. Additional exceptions include allowing a physician to refer patients to another physician within a group practice or to a practitioner employed by the physician. The legislation, as amended by the House Ways and Means Committee, contains several other exceptions.

A number of states also have laws or regulations that restrict self-referral. By fall 1988, some form of disclosure requirement existed in at least eight states.[4] The conditions under which disclosure is required and the form the disclosure must take vary by state. Some states only require disclosure for particular specialties of practice or for an ownership interest in excess of a certain percentage. In addition to disclosure requirements, laws or regulations prohibiting reimbursement for patient referrals exist in several states.

The AMA opposes HR 939 and other legislation prohibiting physician investment in health care facilities. The AMA advocates development of "bright line" rules to advise physicians on acceptable financial investments. Such guidelines would also include disclosure and reporting requirements compelling the physician to inform the patient and the Medicare carrier of any ownership interest in a facility to which

Table 2. **Number of Facilities in which Physician or Family Member has an Investment or Ownership Interest**

	One	Two	Three	Four or more
All Physicians[a]	71.2%	17.1%	8.3%	3.4%
Specialty				
General/Family Practice	60.7	24.5	10.3	4.5
Medical Specialties	75.9	12.0	8.5	3.6
Surgical Specialties	69.7	21.8	4.4	4.1
Other Specialties	72.1	12.7	14.2	1.1
Location				
Nonmetropolitan	80.6	4.2	13.6	1.6
Metropolitan—				
Less than 1,000,000	72.4	14.6	9.1	3.8
1,000,000 and over	67.1	23.5	6.0	3.4
Census Region				
North East	77.5	12.7	6.4	3.4
North Central	81.5	5.6	10.7	2.2
South	64.7	21.9	9.2	4.2
West	72.8	17.5	7.5	2.3

Source: See text of article.
a. Among physicians with an ownership interest in at least one facility.

the patient might be referred. The Medicare carrier could then monitor the physician's utilization of the facility for overutilization of services.[5]

While developing the budget reconciliation package, the Senate Finance Committee also adopted a provision to address physician ownership and self-referral. This proposal would establish a formal mechanism for the Medicare carrier to collect physician ownership information, monitor utilization, and identify utilization abuses. If this process identifies abuses, existing fraud and abuse authority and sanctions (with full due process rights) would apply. Should this matter be the subject of budget reconciliation action, the AMA has voiced support for the Senate Finance Committee proposal.

Analysis of SMS Survey Results

The physician ownership and patient referral results from both the 1988 fall and the 1989 core surveys are presented in Table 1. Over 90% of those physicians surveyed in both years have no ownership interest in a health care facility outside their main practices. Furthermore, less than 8% own facilities and refer patients to them.

In general, the results from both surveys were similar. Like the 1988 survey results, the 1989 results show physicians in other specialties such as radiology, anesthesiology, pathology, and psychiatry to be the least likely to self-refer. The proportion of general/family practitioners who self-refer decreased significantly between 1988 and 1989, from 10.1% to 4.9%. It is not clear why the change occurred only among this group.

At the time the 1988 data were collected, Arizona, California, Florida, Minnesota, Pennsylvania, Virginia, Washington, and West Virginia had implemented general disclosure laws. Data from both surveys demonstrate that physicians in those states are more likely to own a health care facility and refer patients to it. This finding suggests the hypothesis that the legislation followed a public perception of a need to regulate.

Since HR 939 proposes a ban on referral for services for which Medicare is the source of payment, the

Table 3. **Form of Ownership of the Facility in which the Physician or Family Member has an Ownership Interest**

	Sole Proprietorship	Joint Venture with Hospital	Limited Partnership	General Partnership	Stock Company	Other
Overall	3.7%	11.2%	53.0%	15.2%	11.0%	5.9%
Specialty						
General/Family Practice	7.2	3.3	56.4	19.6	10.8	2.7
Medical Specialties	3.6	10.0	51.8	20.7	12.2	1.7
Surgical Specialties	3.7	11.1	51.4	10.2	11.8	11.8
Other Specialties	0.0	25.0	58.9	12.0	4.2	0.0
Location[a]						
Nonmetropolitan	12.4	6.9	32.5	21.4	26.9	0.0
Metropolitan—						
Less than 1,000,000	5.0	12.9	54.2	10.1	11.6	6.2
1,000,000 and over	0.0	10.6	57.6	18.5	5.9	7.4
Census Region						
North East	4.9	18.1	41.4	14.7	9.3	11.8
North Central	11.3	5.2	50.8	13.3	12.4	7.0
South	4.0	12.6	52.3	13.4	12.2	5.5
West	0.0	5.2	63.9	19.3	9.9	1.8

Source: See text of article.
a. The differences among locations are statistically significant at the p= 01 level.

1989 data were analyzed to determine the extent of physician ownership of health care facilities among Medicare providers. The results, not shown in the tables, are not very different from those for all physicians; physician ownership of a private health care facility is not widespread among physicians who provided Medicare services within the 12 months prior to the survey. Less than 10% of physicians who were Medicare providers have an ownership interest in a health facility.

An analysis was done to relate physician ownership and referral to physician employment and income characteristics. These data are also summarized in Table 1. Those physicians who are self-employed, either in a solo or a group practice, are more likely to both own a health care facility and refer patients to it. The data indicate that less than 2% of those physicians who are employees refer patients to a facility in which they have an ownership interest. The annual net income data (after expenses but before taxes) suggest that those physicians who earn more than $150,000 are approximately twice as likely to own a health care facility and refer patients to it. It is unclear whether physicians with higher incomes are more likely to take advantage of investment opportunities or whether investments contribute to higher incomes. Further research will be conducted to investigate this issue.

The 1989 survey contained a number of follow-up questions for those physicians who indicated that they had an ownership interest in a health care facility. The results from the follow-up questions are presented in Tables 2 through 7. Information from Table 2 shows that a majority have an interest in just one facility; less than 30% have an ownership interest in more than one facility. The financial interest in a facility was characterized by form of ownership, number of investors in the facility, amount of initial investment, and method for determining profit share. Information in Table 3 shows that the form of ownership that is most prevalent is the limited partnership. Fifty-three percent of those surveyed with an ownership interest are involved in a limited partnership rather than a sole proprietorship, a joint venture with a hospital, a general partnership, a stock company, or

Table 4. **Number of Investors in Facility, in Addition to Physician or Family Member**

	Less than 6	6-10	11-20	21-30	31-40	More than 40
Overall	17.1%	10.9%	18.3%	19.5%	12.8%	21.4%
Specialty						
General/Family Practice	18.9	9.4	35.0	23.4	7.1	6.2
Medical Specialties	19.2	13.0	23.3	14.9	11.8	17.8
Surgical Specialties	15.8	12.3	11.3	18.8	14.6	27.2
Other Specialties	13.6	0.0	8.7	33.4	15.9	28.5
Location[a]						
Nonmetropolitan	12.5	31.6	30.2	14.0	7.5	4.1
Metropolitan—						
Less than 1,000,000	16.1	7.0	22.6	19.2	10.6	24.4
1,000,000 and over	19.2	9.4	11.2	21.2	16.2	22.8
Census Region						
North East	19.3	5.0	31.1	16.2	19.0	9.4
North Central	22.9	0.0	19.9	15.4	12.8	29.0
South	19.0	10.6	13.6	19.1	14.0	23.6
West	11.1	18.4	16.2	23.5	6.7	24.0

Source: See text of article.
a. The differences among locations are statistically significant at the p=.05 level.

some other type of ownership. Form of ownership varies by location. For example, the limited partnership is the most common form of ownership in nonmetropolitan areas. In metropolitan areas, sole proprietorship is the least common form of ownership, but in nonmetropolitan areas it is more likely than joint ventures with hospitals or other types of arrangements not explicitly specified.

Physicians with an ownership interest are likely to be one of many other investors; slightly more than 50% of the respondents reported being one of more than 20 investors (see Table 4). The number of investors also varies by location. Not surprisingly, in nonmetropolitan areas, nearly 45% indicated being one among ten or fewer investors in a facility. Only slightly more than 25% reported investing in a facility with more than 20 other investors. In metropolitan areas, the majority reported being one among 20 other investors.

The initial investment reported was relatively small; 52% reported investing less than $10,000 or less (see Table 5). Profit share is more likely to be determined by the amount invested than any other method (see Table 6).

The AMA's 1988 fall SMS survey results were the first survey data on the extent of physician ownership and self-referral from a nationally representative sample of physicians. The key finding was that physician ownership of and referral to health care facilities is a relatively rare phenomenon. This finding was substantiated by the 1989 core survey; both 1988 and 1989 SMS data indicate that fewer than 10% of physicians have such an ownership interest. The 1989 survey also collected more extensive data than are elsewhere available on the nature of the financial arrangements. For those physicians who indicated an ownership interest in health care facilities, the extent of their involvement appears to be small.

Footnotes

1. See for example Dickey (1989), Morreim (1989), Relman (1989), Teplitzky (1989), and Thompson and Krushat (1989).
2. The Office of the Inspector General of the Department of Health and Human Services has reported that 45% more clinical laboratory services were

Table 5. **Amount of Initial Investment in Facility**

	$0	Less than $5,000	$5,000 to $10,000	$10,000 to less than $15,000	$15,000 to less than $20,000	$20,000 or more
Overall	1.8%	26.9%	23.3%	17.1%	7.2%	23.6%
Specialty						
General/Family Practice	0.0	36.4	33.1	0.0	9.0	21.6
Medical Specialties	3.7	34.9	23.0	15.8	4.7	17.8
Surgical Specialties	1.2	20.6	19.9	22.4	8.4	27.5
Other Specialties	0.0	15.1	28.1	18.3	9.3	29.2
Location						
Nonmetropolitan	0.0	32.6	11.8	13.8	7.5	34.2
Metropolitan—						
Less than 1,000,000	2.6	25.6	20.8	17.9	6.2	27.0
1,000,000 and over	1.6	26.5	29.2	17.4	8.2	17.2
Census Region						
North East	5.4	24.6	36.8	15.6	4.7	12.8
North Central	0.0	19.5	25.5	25.3	5.2	24.5
South	0.0	28.1	20.3	17.0	3.4	31.1
West	2.6	28.9	17.0	16.0	16.1	19.4

Source: See text of article.

performed on patients of physicians who have an ownership interest in independent clinical laboratories than on all Medicare patients. As acknowledged by the OIG, there is no evidence to suggest that this statistic reflects overutilization.

3. Representative Stark first introduced the Ethics in Patient Referrals Act (HR 5198) in the 100th session of Congress.

4. The eight states that had general disclosure laws by the fall of 1988 are Arizona, California, Florida, Minnesota, Pennsylvania, Virginia, Washington, and West Virginia.

5. Todd and Horan (1989).

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Table 6. **Method of Determination of Profit Share from Investment**

	Amount Invested	Number of Patient Referrals	Combination of Investments and Referrals	Other
Overall	53.6%	6.1%	8.2%	32.2%
Specialty				
General/Family Practice	60.2	0.0	9.0	30.8
Medical Specialties	58.8	8.7	3.3	29.2
Surgical Specialties	44.8	7.1	11.6	36.4
Other Specialties	64.1	0.0	9.6	26.3
Location				
Nonmetropolitan	44.9	0.0	4.0	51.1
Metropolitan—				
Less than 1,000,000	54.0	6.0	8.3	31.6
1,000,000 and over	55.1	7.4	8.9	28.6
Census Region				
North East	37.9	10.8	11.8	39.5
North Central	45.2	14.8	6.2	33.7
South	57.6	4.4	9.6	28.5
West	61.1	2.7	3.8	32.4

Source: See text of article.

Table 7. **Reason for Referring Patients to Facility in which Physician or Family Member has Ownership Interest**

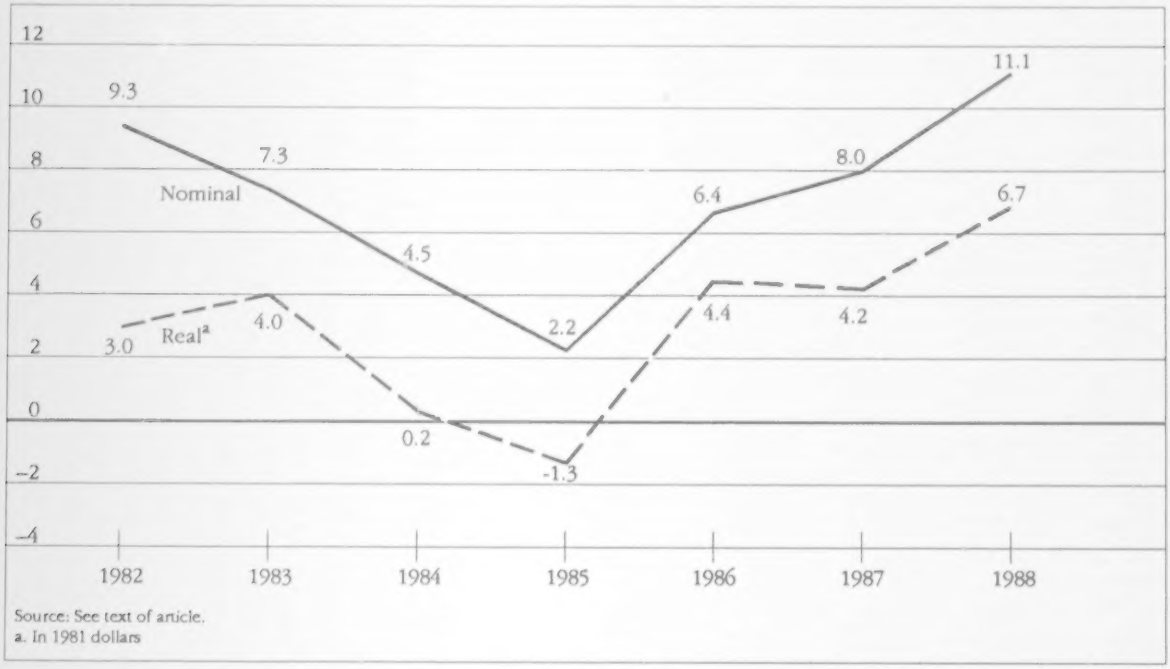
	Better Quality of Care	No Other Facility Conveniently Available	Less Expensive	To Assure Return on Investment
Overall	50.2%	31.9%	14.2%	3.7%
Specialty[a]				
General/Family Practice	34.6	44.5	11.9	9.1
Medical Specialties	49.8	39.7	9.1	1.4
Surgical Specialties	59.7	17.2	18.3	4.8
Other Specialties	32.3	51.3	16.4	0.0
Location[b]				
Nonmetropolitan	19.8	49.2	31.0	0.0
Metropolitan—				
Less than 1,000,000	58.6	28.4	7.9	5.1
1,000,000 and over	50.6	30.4	15.5	3.4
Census Region				
North East	62.6	28.0	2.0	7.3
North Central	31.6	39.7	19.6	9.1
South	48.2	34.3	16.5	1.0
West	49.2	28.8	18.4	3.6

Source: See text of article.
a. The differences among specialties are statistically significant at the p=.05 confidence level.
b. The differences among locations are statistically significant at the p=.01 confidence level.

Physician Earnings, 1981-1988

by David W. Emmons and Martin L. Gonzalez[a]

Figure 1. **Year-to-Year Percent Change in Median Physician Net Income after Expenses before Taxes, 1981-1988.**



Source: See text of article.
a. In 1981 dollars

Variations in physician earnings over time and across specialties provide important indicators of the changes being wrought in the medical practice environment. This report provides an overview of trends and patterns in physician net income by specialty and census division during the period 1981-1988. Throughout the discussion, physician net income (or earnings) is defined to be physician income from medical practice, after expenses but before taxes.

The 1981-1988 income data used in this report are drawn from the 1982-1989 AMA Socioeconomic Monitoring System (SMS) core surveys. The data have been weighted to adjust for survey nonresponse bias. Adjustments to income for the effects of inflation since 1981 were done using the All Items Consumer Price Index for all urban consumers. An appendix to this article outlines the method for making these adjustments.

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Table 1. **Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988**

	Median Net Income			Average Annual Percent Change	
	1981	1988 Nominal	1988 Real[a]	Nominal	Real
All Physicians[b]	$75	$120	$92	6.9%	3.0%
Specialty					
General/Family Practice	60	85	65	5.1	1.2
Internal Medicine	72	109	84	6.1	2.2
Surgery	100	180	138	8.8	4.7
Pediatrics	55	85	65	6.4	2.5
Obstetrics/Gynecology	96	150	115	6.6	2.6
Radiology	105	158	121	6.0	2.1
Psychiatry	64	97	75	6.1	2.2
Anesthesiology	105	180	138	8.0	4.0
Pathology	75	130	100	8.2	4.2
Census Division					
New England	65	110	85	7.8	3.8
Middle Atlantic	70	110	85	6.7	2.7
East North Central	80	120	92	6.0	2.0
West North Central	80	120	92	6.0	2.0
South Atlantic	77	125	96	7.2	3.2
East South Central	80	132	101	7.4	3.4
West South Central	80	130	100	7.2	3.2
Mountain	74	110	85	5.8	1.9
Pacific	77	115	88	5.9	2.0

Source: See text of article.
a. In 1981 dollars.
b. Includes physicians in specialties not listed separately.

Trends in Nominal and Real Earnings

Because income data are typically skewed right, the mean of an income distribution (i.e., average earnings) often fails to provide a good measure of the earnings of a "typical" individual in the underlying population. Instead, it is the median which best reflects a typical earnings level. Table 1 presents data on nominal and real median physician net income for the years 1981 and 1988. Average annual percentage increases in physician earnings are also reported in Table 1. Year-to-year growth in earnings is displayed in Figure 1. The real net income figures presented express physician earnings in terms of the purchasing power of a dollar in 1981.

Table 1 shows that median physician net income rose from $75,000 in 1981 to $120,000 in 1988. This increase corresponds to an average annual growth rate of 6.9%. Table 1 also shows that after controlling for the effects of inflation over the period, physician earnings rose at an average annual rate of only 3.0%, or to just $92,000. Figure 1 shows that substantial year-to-year variations in growth were experienced.

Specialty and geographic variations in the level and growth of physician earnings are also shown in Table 1. Highlights from the data include the following:

- In 1988, median physician earnings among specialties were lowest for pediatrics and general/family practice — $85,000 each;
- In 1988, median physician earnings among specialties were highest among surgery and anesthesiology — $180,000 each;
- Average annual growth in physician net income, from 1981-1988, across specialties, ranged from 5.1% for general/family practice to 8.2% and 8.8%

Table 2. **Distribution of Physician Net Income (in thousands of dollars) after Expenses before Taxes, by Specialty and Census Division, 1988**

	25th Percentile	Median	75th Percentile	Mean	Standard Error of the Mean
All Physicians[a]	$80	$120	$180	$144.7	1.86
Specialty					
General/Family Practice	60	85	114	94.6	2.25
Internal Medicine	77	109	156	130.9	3.91
Surgery	117	180	260	207.5	5.57
Pediatrics	60	85	120	94.9	3.01
Obstetrics/Gynecology	100	150	230	180.7	9.56
Radiology	110	158	230	184.6	6.76
Psychiatry	74	97	130	111.4	4.37
Anesthesiology	126	180	250	194.5	7.44
Pathology	85	130	153	131.0	6.36
Census Division					
New England	80	110	155	133.0	6.14
Middle Atlantic	76	110	160	134.9	4.19
East North Central	80	120	180	147.0	5.05
West North Central	78	120	166	138.2	6.11
South Atlantic	87	125	200	156.0	4.40
East South Central	85	132	213	165.0	9.08
West South Central	83	130	210	160.9	7.41
Mountain	70	110	175	132.1	6.76
Pacific	80	115	168	136.2	4.11

Source: See text of article.
a. Includes physicians in specialties not listed separately.

for pathology and surgery, respectively. In real terms, earnings growth experienced by these specialties were 1.2%, 4.2%, and 4.7%, respectively.

- As in 1981, 1988 physician earnings among census divisions exhibited a fairly small range — from $110,000 in New England, the Mountain states, and the Middle Atlantic states to $130,000 and $132,000 in the West South Central and East South Central divisions, respectively.
- Growth in physician earnings across census divisions, from 1981-1988, ranged from 1.9% in the Mountain states to 3.8% in New England.

As a real growth comparison figure, median family income in the United States, adjusted for inflation, grew at an average annual rate of 1.4% during the period 1981-1987 (*Economic Report of the President*, January 1989). During the same period, median real income among physicians grew at an annual rate of 2.4%. Median family income data for 1988 are not currently available for comparison.

Distribution of Physician Net Income

Although median net income from medical practice is the single statistic best representing "typical" physician earnings, it fails to convey a sense of the range of earnings that might be considered typical. A better picture of earnings emerges when one combines a measure of central tendency with a dispersion statistic. This is often done by examining means and standard errors of the data. It may also be accomplished, however, by examining medians and interquartile ranges, i.e., ranges from the 25th percentile of earnings to the 75th percentile. Table 2 reports both sets of information for physician earnings in 1988.

Table 3. **Consumer Price Index 1970 to 1988**[a]

Year	CPI	Year	CPI
1970	38.8	1979	72.6
1971	40.5	1980	82.4
1972	41.8	1981	90.9
1973	44.4	1982	96.5
1974	49.3	1983	99.6
1975	53.8	1984	103.9
1976	56.9	1985	107.6
1977	60.6	1986	109.6
1978	65.2	1987	113.6
		1988	118.4

Source: Bureau of Labor Statistics All Items Consumer Price Index for all urban consumers.
a. Base year 1982-1984=100.

Several points emerge from Table 2:

- Comparison of the mean to the median income indicates that a majority of physicians earn less than the average earnings level. Although average net income among physicians was $144,700, half of all physicians earned less than $120,000.
- The rankings of median and mean net income across specialties, and across census divisions, were quite similar. Mean net income, however, was larger than median net income for all breakouts reported.
- Substantial uniformity exists among census divisions in the lowest levels of earnings, but not in the highest levels.
- Earnings of lower paid specialties are generally less disperse than the earnings of higher paid specialties. Dispersion in earnings (as measured by the difference in interquartile earnings) among specialties with lower than average net income ranged from $48,000 to $79,000, while dispersion in earnings among specialties with above average net income ranged from $124,000 to $143,000.

Examination of the standard errors of the means also provides evidence to support the latter point.

Summary and Conclusions

Analysis of trends in nominal and real physician net income indicates that physician income growth exceeded the rate of inflation during the period 1981-1988. During that period, median nominal net income increased at an average annual rate of 6.9%. In real terms, average annual growth was 3.0%.

The rate of growth in median earnings, both real and nominal, varied by specialty and census division during this period. General/family practice physicians experienced the lowest rate of growth in both real and nominal terms during the 1981-1988 period. Surgeons experienced the highest rate of growth during this period. Across census divisions real earnings growth rates ranged from 1.9% in the Mountain states to 3.8% in New England.

Most physicians earned less then the mean net income of $144,700 in 1988. Half of physicians earned less than $120,000 and one-fourth earned less than $80,000. At the lower end of the income distribution half of all general/family practice physicians earned less than $85,000 and one-fourth earned less than $60,000. At the upper end of the distribution, half of all surgeons earned $180,000 or more and one-fourth earned $260,000 or more.

Appendix: Methodology for Computing Real Income

In the preceding article 1988 nominal net income figures were converted to real net income figures in order to control for the effects of inflation that occurred during the period 1981-1988. In this instance, real net income figures were expressed in terms of the purchasing power of a dollar in 1981. However, it is also possible to express real net income in terms of the purchasing power of a dollar in 1970 or any other year. This can be done using the figures from the All Items Consumer Price Index (CPI) that are presented in Table 3.

The basic formula for converting dollars in one year to a number that expresses their purchasing power in another year is as follows:

Real dollars in year i = CPI_i/CPI_j x nominal dollars in year j

where CPI_i = the Consumer Price Index for the year in which the real dollars will be expressed (year i), and

CPI_j = the Consumer Price Index for the year in which the nominal dollars are expressed (year j).

For example, the following formula was used to convert 1988 nominal net income to real income in 1981 dollars:

Real net income = CPI_{1988}/CPI_{1981} x 1988 nominal median net income =

90.9/118.4 x $120,000 = $92,400.

In January 1988, the Bureau of Labor Statistics changed the base period used to calculate the Consumer Price Index. The index was changed in order to better reflect current consumption patterns and thus provide a more accurate measure of changes in the costs of goods and services. As part of the change, the base period for the index was changed from 1967 to the period 1982-1984. All of the information in Table 3 reflect this change.

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Employment Patterns of Physicians, 1983-1989

by Kurt D. Gillis and Richard J. Willke

Recent changes in the health care industry, such as the increased number of medical graduates within the last decade and the growing national concern with health care costs, may greatly influence physicians' future practice environment. One outcome may be a change in the employment decisions of physicians. Presently, only about one-fourth of all nonfederal, patient care physicians do not have an ownership interest in their principal practice. The changes mentioned above and other factors, such as the rising cost of malpractice coverage, may cause self-employment to become an increasingly less attractive practice option, and result in a rise in the proportion of employee physicians. This article will examine recent patterns in the employment status of physicians using data from the 1983-1989 AMA Socioeconomic Monitoring System (SMS) core surveys of nonfederal, patient care physicians, excluding residents.

1983-1989 Trends

Recent research suggests that, contrary to what might be deemed popular perception, there has not been a tendency for the proportion of employee physicians to rise. Marder, Emmons, Kletke and Willke (1988), using data from 1983 through 1988, found only a slight, statistically insignificant change in the proportion of employee physicians. However, they reported large differences in the proportion of employees across age and specialty categories and by sex. These differences are important because, should they persist, changes in the mix of physicians will lead to predictable changes in the fraction that are employees.

Marder et al. also show that the probability that a physician is an employee declines rapidly with age. One explanation for this finding is that ownership may be the desired situation for most, but younger physicians may not have the financial resources and have had less time to search for ownership opportunities. Thus, the observed relationship between ownership and age may reflect a stable, life-cycle pattern of physician employment. However, an alternative explanation is that changes in the health care industry cited above are making self-employment less attractive to young physicians. If this is the case, and this group of physicians continues to favor employee status as they age, then the high proportion of employees found for that group may signal a trend away from self-employment.

In an effort to determine the effect of recent developments on ownership status, the proportion of employee physicians was calculated by level of experience using data from the SMS survey program for the years 1983-1989. Compared to age, years of experience provides a better indicator of financial status and time to search for self-employment opportunities, thus implying that experience may be linked more closely to likelihood of ownership than age. Table 1 reports estimates of the proportion of employee physicians by years of practice for 1983-1989.

Due to a change in the SMS questionnaire, the results for 1983-1986 are not directly comparable to those for 1987-1989. Prior to 1987, respondents were classified as either employees or nonemployees. Beginning in 1987, the third category of independent contractor was added. Prior to 1987, independent contractors ought to have been captured as employees on the surveys. However, interviewer-interviewee interaction may have resulted in some independent contractors being classified as self-

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Table 1. **Percentage of Employee Physicians by Experience Level, 1983-1989**

	Years of Experience							
	0-2	3-5	6-8	9-11	12-14	15-17	18+	Overall
1983	50.6%	29.2%	21.3%	22.0%	18 .0%	22.7%	18.9%	24.2%
1984	53.0	30.7	23.2	18.9	20.6	18.2	17 .8	23.6
1985	56.7	31.5	22.3	19.2	24.6	17.8	19.0	24.6
1986	54.8	31.7	35 .4	21.8	22.3	20.8	18.8	26.2
1987[a]	58.2	34.4	29 .0	23.8	23.6	22 .8	21 .0	27.0
1987[b]	52.8	28.3	24.6	18.8	19.6	19.1	17 .7	22.7
1988[a]	60.2	37.5	29.3	29.0	25.1	24.4	21.9	28.3
1988[b]	54.1	32.0	24.7	22 .7	20.6	20.7	17.8	23.6
1989[a]	65.7	47.1	32.4	27.6	24.2	24.9	23.4	30.1
1989[b]	57.9	38.9	26.9	21.5	18.6	19.5	17.8	24.1

Source: See text of article.
a. Including independent contractors.
b. Excluding independent contractors.

employed. Thus, two sets of figures are reported here for the years 1987-1989 in Table 1. The top row for each year reports the percentage of respondents that were either employees *or* independent contractors. If, prior to 1987, all independent contractors were categorized as employees then the figures from this row would be directly comparable to those before 1987. What if, instead, all independent contractors were previously classified as being self-employed? Then the appropriate 1987-1989 figures for comparison would be the percentage responding specifically as employees, which is reported on the bottom row for each year. Note that the difference between the top and bottom rows is the percentage of independent contractors. Since *some* independent contractors were most likely classified as self-employed before 1987, the figures reported in the top and bottom rows for 1987-1989 can be regarded as upper and lower bounds for comparison with estimates of employee status prior to 1987.

The data in Table 1 clearly show a pattern of increasing ownership with experience. In each survey year, the more experienced physician is generally less likely to be an employee. For all survey years, the majority of sampled physicians with zero to two years experience were employees. However, this percentage falls quickly with years of practice so that those with six to eight years experience are generally half as likely to be employees as those in the zero-to-two-year experience category. For example, in 1989 an estimated 65.7% of nonfederal, patient care physicians with zero to two years experience were employees or independent contractors. This percentage fell to 32.4% for physicians with six to eight years of practice though, and to only 27.6% for those with nine to11 years in practice.

Do these results show that there are differences in employment preference among experienced and inexperienced physicians, or do they reflect a stable, life-cycle pattern of physician employment? To address this question, it is useful to track cohorts or groups of physicians that entered practice during the same period. Although the employment history of individual physicians cannot be tracked, the group of physicians with zero to two years experience in 1983 are comparable to those with three to five years experience in 1986 and six to eight years expe-

Table 2. **Percentage of Employee Physicians by Experience Level, Specialty, and Sex, 1989[a]**

	Years of Experience							
	0-2	3-5	6-8	9-11	12-14	15-17	18+	Overall
All Physicians	57.9%	38.9%	26.9%	21.5%	18.6%	19.5%	17.8%	24.1%
Specialty								
General/Family Practice	60.4	30.1	18.2	23.2	9.0	18.5	13.3	18.9
Internal Medicine	57.4	37.9	27.1	17.8	15.0	14.4	16.4	23.4
General Surgery	51.4	21.2	10.0	12.4	8.9	12.9	13.0	14.4
Pediatics	69.6	51.9	43.7	26.4	42.6	30.0	17.6	34.3
Obstetrics/Gynecology	54.7	25.4	12.7	6.7	12.3	2.8	12.6	15.6
Radiology	82.1	48.1	26.5	34.9	51.2	24.1	26.5	33.3
Psychiatry	42.5	57.8	46.9	24.8	16.2	26.9	26.2	30.1
Anesthesiology	71.5	51.0	23.0	24.3	10.1	24.8	14.7	25.4
Pathology	100.0	79.2	66.9	45.0	43.7	60.2	31.6	49.8
Other Specialties	44.4	50.3	39.7	36.2	28.6	30.3	34.0	36.8
Sex								
Male	56.4	34.2	24.3	20.3	15.8	18.2	16.6	21.7
Female	64.4	57.7	39.1	28.8	47.8	32.4	36.5	43.0

Source: See text of article.
a. Percentages exclude independent contractors.

rience in 1989. Although over half of this group sampled in 1983 (50.6%) were employees, less than one-third were employees by 1986 (31.7%). There is little evidence of change in ownership status for this group from 1986 to 1989, however. Similar comparisons of cohorts can be made throughout the table, providing evidence that the pattern of moving to self-employment is quite stable. Interestingly, whether examining employment status by experience in a single year, or following physician cohorts over time, there appears to be little change in employment status for those with 12 or more years experience. Most of the drop in employee status occurs during the first eight years of practice.

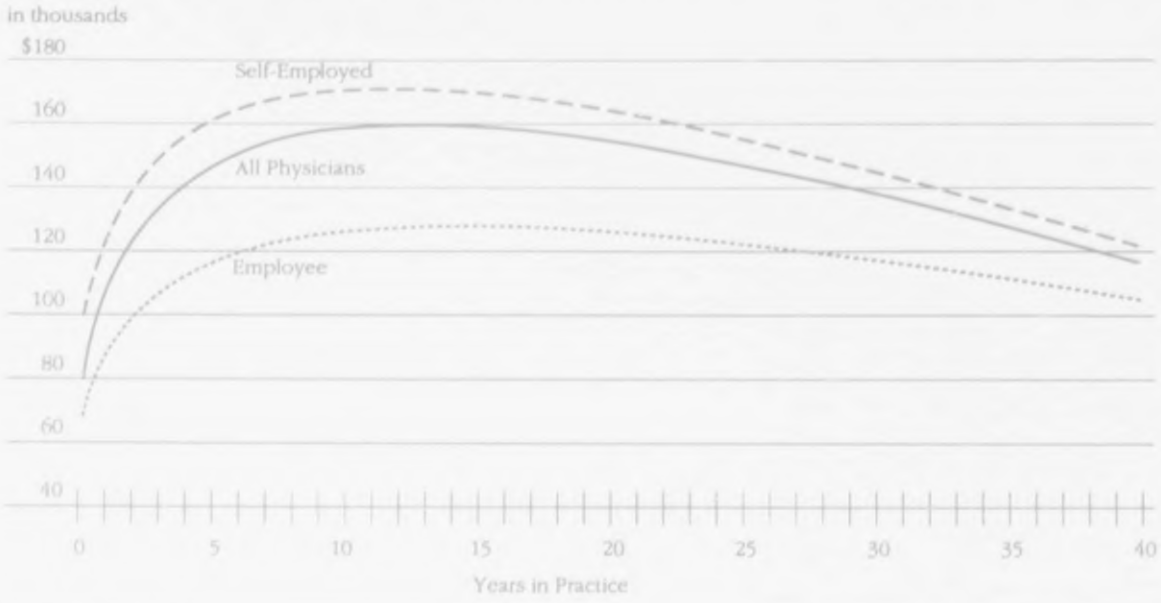
However, there does appear to be an upward trend in the proportion of employee physicians in the low-experience categories. Establishing a clear trend over the entire 1983-1989 period is difficult due to the change in categorizing employment. Using the upper bounds for the 1987-1989 estimates would lead one to believe that rather dramatic changes have occurred. In the zero-to-two-year experience category, employee physicians would have increased by over 15 percentage points from 1983 to 1989, and in the three-to-five-year category they would have increased by nearly 18 percentage points. Even using the lower bound estimates, the data show that self-employment has dropped among inexperienced physicians. Over the period from 1983 to 1989, employee status has increased by an estimated 7.3 and 9.7 percentage points, respectively, in the zero-to-two and three-to-five-year categories using the lower bounds.

Despite this, trends in the overall proportion of employee physicians are unclear. The lower bound estimates show a slight increase in the proportion of employee physicians over the past three years but show a decline from 24.2% to 24.1% over the entire 1983-1989 period. The upper bound estimates show the opposite — a 5.9 percentage point increase in the proportion of employee physicians from 1983 to 1989. Additional years of data should help to determine if declining self-employment for the overall physician population is a reality.

1989 Patterns by Specialty and Sex

Table 2 presents the employee/experience profiles by specialty and sex for 1989. These figures represent the proportion of all sampled physicians responding specifically as employees. The percentages over all experience categories shown in Table 2

Figure 1. **Expected Physician Income by Years in Practice, 1988**



Source: See text of article

illustrate the great differences in employee status which occur across specialties and by sex. A principal difference is that females are about twice as likely to be employees as males. The *shapes* of the employee/experience profiles also differ between men and women. Only 16.6% of males with 18 or more years experience were employees, compared with 56.4% of those in the zero-to-two-years experience category, a decline of about 70%. The decline in the female percentage is not nearly so steep. Women are only somewhat more likely to be employees than men in the zero-to-two-year category (64.4% employees) but are more than twice as likely to be employees in the most experienced category (36.5% employees).

The female pattern of employment and experience reported in Table 2 may partly reflect the characteristics of women in the different experience categories. Changes in employment preference among younger women relative to older women will affect the employment decision. However, should the current pattern persist, the recent increase in the proportion of female physicians will tend to increase the overall proportion of employee physicians. This occurs because women starting practice are more likely to be employees, and because women appear to leave the ranks of the employed at a slower rate.

There are also differences in employment/experience profiles by specialty. Note from Table 2 that a few of these specialty profiles, particularly the pathology and radiology profiles, exhibit uneven patterns due to the limited number of physicians in some specialty/experience categories. Despite this, interesting differences can be observed. Some specialties, such as general/family practice and internal medicine, exhibit patterns similar to the profile for all physicians. For these specialties, the proportion of employees starts out at roughly 60% in the zero-to-two-year experience category, declines rapidly to less than 30% after eight years and falls gradually to less than 20% thereafter. Other specialties, such as surgery or obstetrics and gynecology, show steeper declines in the proportion of employee physicians, suggesting that the move to self-employment occurs very quickly in these fields. For example, with general surgery the proportion of employee physicians had declined to 10% for those with only six to eight years experience, but thereafter remained fairly constant. Still other specialties, such as radiology and psychiatry, have much flatter employee/experience profiles which generally stay above the overall rate. Again, should these patterns persist, changes in the choice of specialty for physicians will affect the overall rate of self-employment.

Employment Status and Income

One predictable consequence of a change in the rate of self-employment is the effect on physician income. Self-employed physicians earn substantially more than employee physicians with similar specialty, experience, and other characteristics. In 1989, the mean income of self-employed physicians sampled in the SMS survey (including independent contractors) was approximately $158,000 while the corresponding figure for employees was about $110,000 — a difference of 42% of mean employee income. However, it should be noted that employee physicians report working fewer hours than those that are self-employed, and that differences in employment by specialty and sex discussed above will affect these averages.

In addition to differences in the overall level of earnings, the relationship between experience and earnings may differ between employee and self-employed physicians. Figure 1, which plots expected income by years of practice, indeed suggests that earning patterns differ among the two groups. In calculating the income values reported in this figure, the specialty, sex, board certification, and other physician characteristics that affect income were controlled for, thus isolating the effect of years of practice on income. The data are from the 1989 SMS core survey which recorded physician income for 1988. The income values reported can thus be interpreted as the expected earnings for the "average" physician with a given level of experience in 1988. These values should *not* be regarded as a projection of what a typical physician would earn over their lifetime. Such an interpretation would require that the overall level of income and prices as well as other factors which affect physician earnings remain unchanged throughout the years of practice.

According to Figure 1, earnings rise rapidly with years of experience in the early years of practice. This is true for both employees and the self-employed, although the absolute increase in income is greater for the self-employed. Earnings for the typical self-employed physician peak for those with about 11 years experience, while average employee income peaks somewhat later. Note that for those just beginning practice (zero years in practice) that overall physician income is closer to that predicted for employees than for the self-employed. This reflects the fact that the majority of physicians beginning practice in 1988 were employees. Should a trend away from physician self-employment develop, the pattern of income and experience for *all* physicians will tend to move closer to that for employees.

Summary

The preceding analysis illustrates that the characteristics of the physician population are very important in determining the extent of physician self-employment and in turn physician income. Recent data suggest that physicians with few years experience are practicing as employees at a higher rate than in the past. However, following groups of young physicians over the survey years shows that they are still becoming self-employed at a rapid rate. Large differences in employment with respect to experience were also found between specialty categories and by sex. Overall, trends for physician employment are currently not clear. Further monitoring of employment choice will be necessary to determine if the prevalence of self-employment is declining.

Reference

Marder, William D., David W. Emmons, Phillip R. Kletke, and Richard J. Willke. "Physician Employment Patterns: Challenging Conventional Wisdom." *Health Affairs*, pp. 137-145, Winter 1988.

Socioeconomic
Characteristics of
Medical Practice
1989

Detailed Statistics

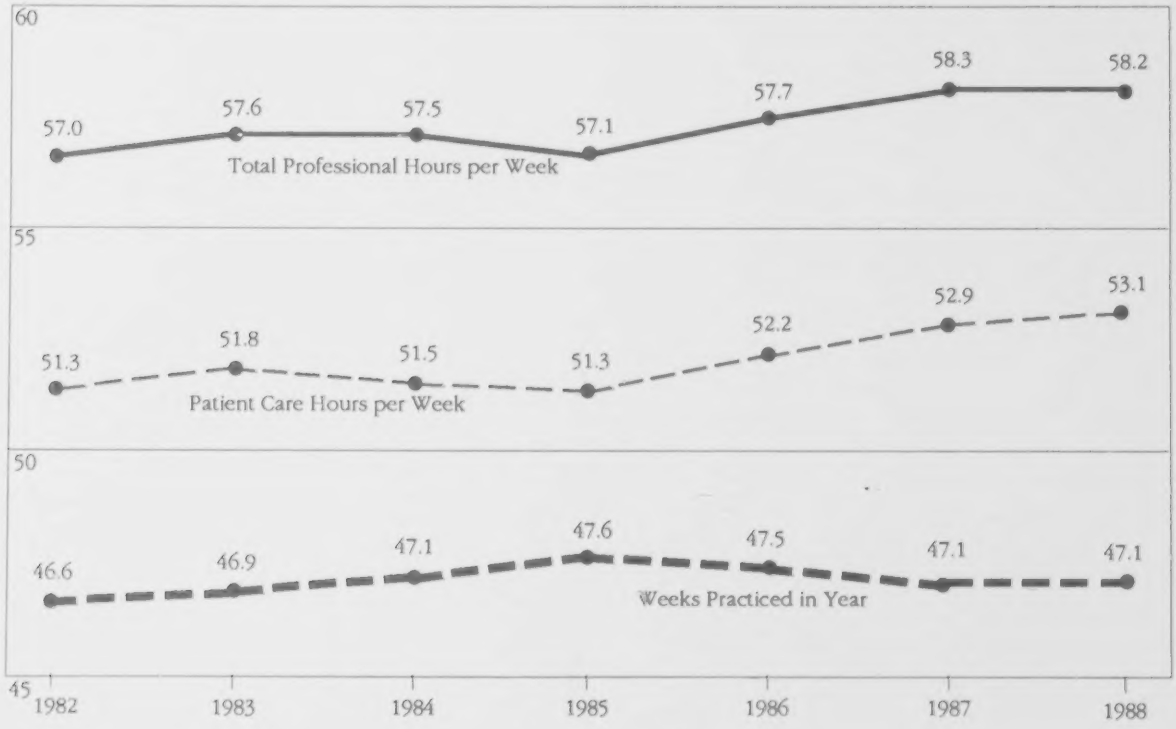
Weeks and Hours of Practice
Utilization of Physician Services
Hospital Utilization by Physicians
Fees for Physician Visits
Professional Expenses of Physicians
Physician Net Income after Expenses before Taxes

Weeks and Hours of Practice

The time spent in practice by physicians is measured in weeks per year and hours per week. Three measures of total hours in practice can be distinguished. Total professional hours combines hours in patient care with those in other professional activities, such as teaching, research, and administration. Hours in patient care activities excludes other professional hours. Direct patient care hours includes only time spent directly seeing patients; time spent in patient-related activities, such as interpreting tests and telephone contacts with patients and their families, is excluded. Direct patient care hours are allocated by activity into hours spent seeing patients in the office, on hospital rounds, in surgery (operating and delivery rooms), and in other settings.

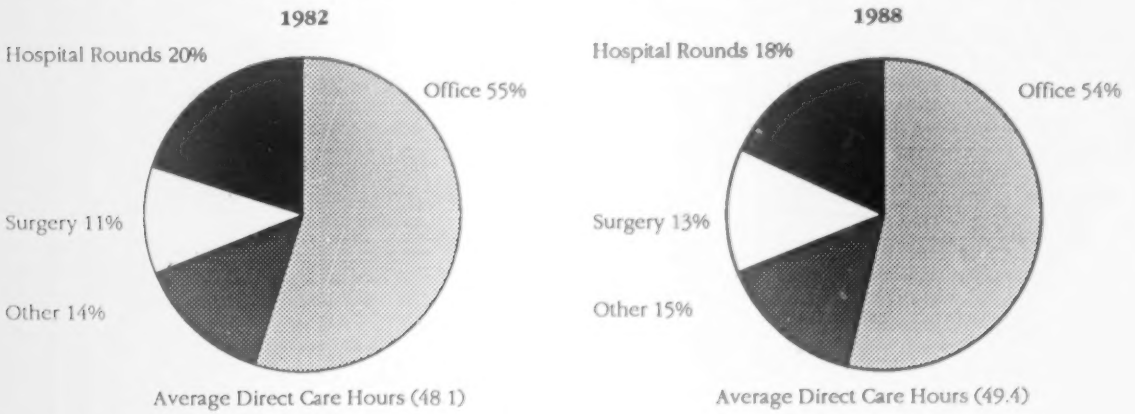
Figures 1 and 2 indicate that average weeks of practice per year, hours per week, and the allocation of direct patient care hours by activity were relatively stable from 1982 to 1988. Significant variations in average direct patient care hours and their allocation in 1988 by specialty are shown in Figure 3.

Figure 1. **Average Weeks and Hours per Week of Practice by All Physicians, 1982-1988**



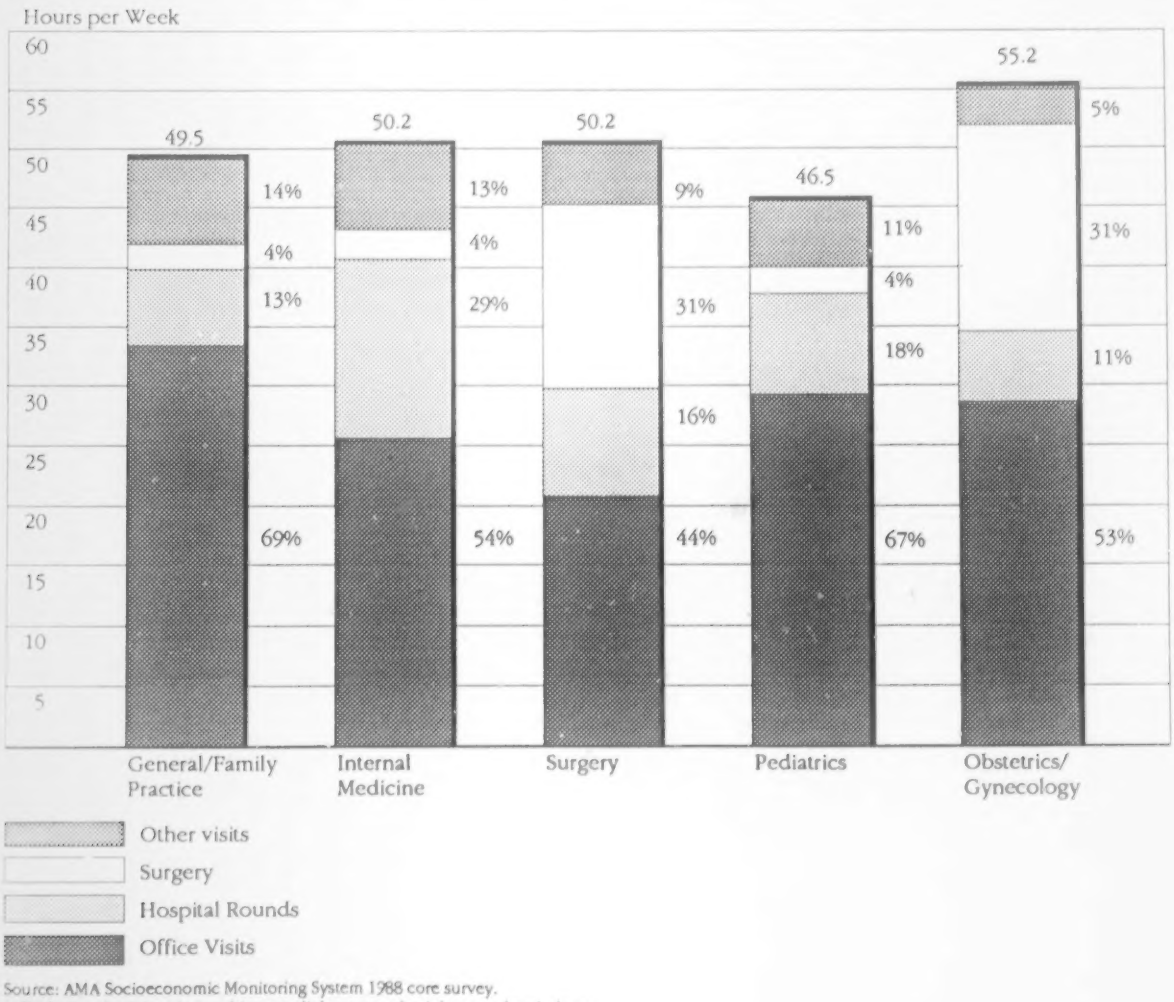
Source: AMA Socioeconomic Monitoring System 1982-1988 core surveys.

Figure 2. **Distribution of Average Direct Patient Care Hours per Week of All Physicians, 1982 and 1988[a]**



Source: AMA Socioeconomic Monitoring System 1982 and 1988 core surveys.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 3. **Distribution of Average Direct Patient Care Hours per Week, by Specialty, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Table 1. **Mean Number of Weeks Practiced, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	47.1	47.9	47.3	46.9	47.2	47.3	44.9	47.4	45.8	47.0
Census Division										
New England	46.2	47.1	46.2	46.1	43.3	.	.	47.5	.	.
Middle Atlantic	47.0	47.7	47.5	46.1	47.8	46.7	45.9	46.7	45.5	.
East North Central	47.1	48.0	47.3	47.0	47.9	46.8	43.5	47.5	47.1	46.7
West North Central	46.6	47.4	45.8	46.6	.	.	.	.	.	.
South Atlantic	47.4	47.8	47.8	47.5	48.1	47.5	44.7	47.9	45.3	.
East South Central	47.0	48.9	46.8	46.2	.	.	.	.	.	.
West South Central	47.9	48.3	48.4	47.4	47.6	49.0	46.1	.	.	.
Mountain	47.1	47.2	46.0	47.3	.	.	.	.	.	.
Pacific	47.1	48.3	48.0	47.0	46.8	46.1	44.6	47.6	44.4	.
Type of Practice										
Solo	47.9	48.5	47.9	47.5	48.4	48.4	.	47.7	45.2	.
Non-solo	46.7	47.4	47.0	46.4	46.7	46.4	44.8	47.0	46.0	46.8
Location										
Nonmetropolitan	47.4	48.0	45.5	47.1	.	.	47.0	.	.	.
Metropolitan—										
Less than 1,000,000	46.9	47.8	47.2	46.7	47.1	47.4	44.1	47.8	45.4	46.4
1,000,000 and over	47.2	48.1	47.7	47.1	47.1	47.1	45.5	47.1	45.9	47.4
Employment Status										
Self-employed	47.4	48.4	47.6	47.0	47.8	47.9	45.2	47.6	45.6	45.9
Employee	46.4	46.5	46.5	46.1	46.1	44.8	44.7	47.0	46.0	47.6
Physician Age										
Less than 36 years	45.3	45.6	45.8	45.3	46.2	42.5	41.3	.	44.0	.
36-45 years	47.3	48.0	47.5	47.4	46.7	47.6	45.7	47.4	46.6	47.4
46-55 years	47.2	48.6	47.7	46.7	48.2	47.7	45.1	47.5	45.2	46.3
56-65 years	47.4	48.4	47.9	46.7	47.8	48.1	44.7	47.7	45.8	47.2
66 or more years	47.6	48.3	47.1	47.3	.	.	.	46.8	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 1 (continued). **Standard Error of the Mean Number of Weeks Practiced, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	0.07	0.15	0.18	0.13	0.24	0.28	0.25	0.19	0.28	0.24
Census Division										
New England	0.33	0.60	0.81	0.68	1.94	.	.	0.34	.	.
Middle Atlantic	0.16	0.44	0.38	0.41	0.28	0.76	0.27	0.56	0.76	.
East North Central	0.14	0.28	0.40	0.20	0.30	0.65	1.03	0.50	0.41	0.30
West North Central	0.28	0.47	1.21	0.67	.	.	.	.	.	.
South Atlantic	0.14	0.44	0.27	0.25	0.32	0.79	0.33	0.29	0.77	.
East South Central	0.33	0.29	1.22	0.66	.	.	.	.	.	.
West South Central	0.16	0.35	0.26	0.41	0.71	0.25	0.49	.	.	.
Mountain	0.33	1.04	1.49	0.51	.	.	.	.	.	.
Pacific	0.17	0.37	0.23	0.33	0.74	1.07	0.64	0.38	0.94	.
Type of Practice										
Solo	0.10	0.17	0.30	0.18	0.48	0.28	.	0.25	0.60	.
Non-solo	0.08	0.24	0.22	0.19	0.27	0.42	0.26	0.30	0.31	0.25
Location										
Nonmetropolitan	0.24	0.30	1.21	0.58	.	.	0.47	.	.	.
Metropolitan—										
Less than 1,000,000	0.10	0.23	0.29	0.20	0.32	0.38	0.44	0.26	0.48	0.43
1,000,000 and over	0.09	0.26	0.20	0.19	0.37	0.43	0.28	0.27	0.34	0.21
Employment Status										
Self-employed	0.07	0.12	0.18	0.12	0.27	0.19	0.25	0.22	0.28	0.57
Employee	0.15	0.48	0.45	0.48	0.44	1.24	0.47	0.37	0.59	0.18
Physician Age										
Less than 36 years	0.32	0.64	0.83	0.82	0.95	1.70	1.42	.	1.19	.
36-45 years	0.10	0.21	0.24	0.19	0.41	0.38	0.27	0.33	0.28	0.27
46-55 years	0.10	0.19	0.19	0.23	0.21	0.24	0.26	0.29	0.51	0.53
56-65 years	0.11	0.25	0.27	0.25	0.35	0.37	0.80	0.29	0.55	0.28
66 or more years	0.22	0.28	0.89	0.33	.	.	.	0.65	.	.

Table 2. **Mean Number of Weeks Practiced per Year, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	46.4	46.6	46.9	47.1	47.6	47.5	47.1	47.1
Specialty								
General/Family Practice	47.2	46.9	47.2	47.6	48.5	48.3	47.7	47.9
Internal Medicine	46.2	46.7	47.0	47.2	47.8	47.9	47.4	47.3
Surgery	46.3	46.2	46.9	47.3	47.3	47.1	47.0	46.9
Pediatrics	46.4	47.2	47.2	47.4	48.0	47.8	47.4	47.2
Obstetrics/Gynecology	46.5	46.9	47.1	46.9	48.0	47.6	47.1	47.3
Radiology	46.1	46.2	45.4	45.4	45.4	45.6	45.2	44.9
Psychiatry	47.1	47.2	47.0	47.1	47.6	47.6	47.3	47.4
Anesthesiology	45.7	46.1	45.4	45.6	46.4	46.3	45.3	45.8
Census Division								
New England	46.2	45.9	46.6	47.4	47.0	46.8	46.1	46.2
Middle Atlantic	46.4	46.7	46.9	46.5	47.7	47.2	47.1	47.0
East North Central	46.0	46.8	46.6	47.0	47.2	47.2	46.9	47.1
West North Central	45.9	46.4	45.9	47.3	47.3	47.5	46.9	46.6
South Atlantic	47.1	46.9	47.0	47.2	47.9	48.0	47.5	47.4
East South Central	47.0	47.8	48.2	47.6	48.2	48.1	47.4	47.0
West South Central	47.2	46.5	47.6	47.7	48.2	48.0	47.5	47.9
Mountain	46.5	46.1	46.2	47.1	47.7	47.3	46.8	47.1
Pacific	45.8	46.3	46.8	47.1	47.4	47.2	47.0	47.1
Type of Practice								
Solo	46.7	47.0	47.7	47.7	48.2	48.1	48.1	47.9
Non-solo	46.1	46.3	46.2	46.6	47.2	47.1	46.5	46.7
Location								
Nonmetropolitan	46.6	46.8	47.5	47.6	48.3	48.1	47.4	47.4
Metropolitan—								
Less than 1,000,000	46.7	46.5	46.7	47.1	47.5	47.4	47.1	46.9
1,000,000 and over	46.1	46.7	46.9	47.0	47.5	47.4	47.0	47.2
Physician Age								
Less than 36 years	44.3	44.1	44.6	45.0	48.0	47.6	44.3	45.3
36-45 years	47.0	47.0	47.2	47.5	47.6	47.6	47.5	47.3
46-55 years	47.1	47.4	47.5	47.7	47.4	47.2	47.3	47.2
56-65 years	47.0	47.1	47.6	47.4	47.4	47.4	47.5	47.4
66 or more years	46.0	46.5	46.9	46.5	47.8	47.9	47.5	47.6

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 2 (continued). **Standard Error of the Mean Number of Weeks Practiced per Year, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.11	0.11	0.09	0.08	0.05	0.05	0.07	0.07
Specialty								
General/Family Practice	0.25	0.31	0.25	0.19	0.11	0.15	0.18	0.15
Internal Medicine	0.34	0.31	0.26	0.26	0.14	0.12	0.17	0.18
Surgery	0.22	0.25	0.18	0.17	0.10	0.12	0.14	0.13
Pediatrics	0.44	0.36	0.27	0.30	0.15	0.14	0.24	0.24
Obstetrics/Gynecology	0.44	0.38	0.30	0.37	0.15	0.26	0.27	0.28
Radiology	0.23	0.24	0.26	0.29	0.20	0.18	0.28	0.25
Psychiatry	0.25	0.23	0.29	0.23	0.12	0.15	0.26	0.19
Anesthesiology	0.31	0.32	0.34	0.26	0.21	0.19	0.33	0.28
Census Division								
New England	0.41	0.50	0.30	0.27	0.23	0.25	0.40	0.33
Middle Atlantic	0.26	0.26	0.23	0.25	0.11	0.15	0.18	0.16
East North Central	0.30	0.22	0.20	0.20	0.14	0.13	0.17	0.14
West North Central	0.44	0.35	0.39	0.25	0.17	0.17	0.27	0.28
South Atlantic	0.22	0.27	0.23	0.21	0.11	0.11	0.15	0.14
East South Central	0.49	0.27	0.25	0.37	0.16	0.18	0.33	0.33
West South Central	0.36	0.39	0.23	0.24	0.14	0.13	0.23	0.16
Mountain	0.35	0.47	0.48	0.39	0.19	0.25	0.36	0.33
Pacific	0.33	0.30	0.22	0.19	0.13	0.15	0.19	0.17
Type of Practice								
Solo	0.17	0.17	0.12	0.12	0.08	0.08	0.08	0.10
Non-solo	0.15	0.14	0.13	0.11	0.06	0.07	0.10	0.08
Location								
Nonmetropolitan	0.38	0.33	0.26	0.24	0.13	0.13	0.23	0.24
Metropolitan—								
Less than 1,000,000	0.15	0.16	0.13	0.13	0.08	0.08	0.11	0.10
1,000,000 and over	0.17	0.16	0.13	0.12	0.07	0.08	0.11	0.09
Physician Age								
Less than 36 years	0.45	0.46	0.38	0.37	0.14	0.17	0.37	0.32
36-45 years	0.16	0.17	0.14	0.12	0.07	0.08	0.10	0.10
46-55 years	0.16	0.15	0.11	0.11	0.10	0.12	0.08	0.10
56-65 years	0.18	0.17	0.13	0.14	0.11	0.12	0.11	0.11
66 or more years	0.39	0.30	0.30	0.29	0.20	0.16	0.23	0.22

Table 3. **Mean Number of Hours in Professional Activities per Week, 1988[a]**

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	58.2	58.3	61.4	59.2	57.3	63.4	57.1	49.0	58.8	50.2
Census Division										
New England	56.0	56.2	58.3	58.3	.	.	.	50.9	.	.
Middle Atlantic	56.3	56.2	59.8	56.9	55.8	62.1	57.2	48.7	58.3	.
East North Central	57.6	58.5	59.2	58.6	59.0	60.2	53.1	51.0	58.5	52.5
West North Central	57.7	61.3	61.6	53.3	.	.	.	.	.	.
South Atlantic	60.4	57.2	64.2	62.0	59.6	67.2	57.8	48.0	64.1	48.2
East South Central	62.1	64.0	67.9	61.0	.	.	.	.	.	.
West South Central	58.7	60.4	63.3	57.1	57.6	61.9	61.8	50.3	.	.
Mountain	60.4	59.5	62.0	64.5	.	.	.	.	.	.
Pacific	57.1	54.8	61.2	60.5	52.7	63.8	56.3	45.8	55.7	.
Type of Practice										
Solo	59.0	59.0	63.6	59.6	60.0	63.6	56.2	49.5	56.6	.
Non-solo	57.7	57.7	60.0	58.8	56.2	63.2	57.2	48.2	59.4	50.7
Location										
Nonmetropolitan	61.0	62.2	66.0	57.7	63.0	70.6	61.4	.	.	.
Metropolitan—										
Less than 1,000,000	58.7	57.5	63.2	59.9	57.2	63.7	57.6	47.3	59.1	51.5
1,000,000 and over	57.2	56.4	59.7	58.7	56.5	62.5	55.9	50.2	58.7	48.3
Employment Status										
Self-employed	59.5	59.6	63.5	59.8	59.3	63.5	57.9	49.8	57.8	49.0
Employee	54.8	54.1	54.9	56.0	53.8	62.8	55.9	47.3	60.4	50.9
Physician Age										
Less than 36 years	59.7	59.4	59.9	61.0	59.1	63.9	60.7	.	61.0	.
36-45 years	60.3	61.2	63.7	61.2	58.5	65.4	59.5	49.7	61.1	52.6
46-55 years	58.4	58.3	61.8	60.8	57.0	65.0	57.6	48.6	58.4	49.2
56-65 years	56.9	58.9	58.6	58.0	54.7	61.6	53.7	50.5	53.8	50.0
66 or more years	49.7	50.6	54.1	46.4	.	52.9	.	43.8	.	.

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 3 (continued). **Standard Error of the Mean Number of Hours in Professional Activities per Week, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	0.27	0.68	0.68	0.62	0.90	1.00	0.84	0.87	1.16	0.98
Census Division										
New England	1.02	2.79	1.85	3.10	.	.	.	2.07	.	.
Middle Atlantic	0.69	1.94	1.62	1.64	1.87	2.58	2.27	1.71	3.10	.
East North Central	0.62	1.66	1.50	1.40	2.29	2.25	1.67	2.00	2.20	2.29
West North Central	0.92	1.76	2.22	1.90	.	.	.	.	.	.
South Atlantic	0.67	1.64	1.55	1.53	2.11	2.54	1.86	2.29	2.67	1.45
East South Central	1.36	3.00	3.74	2.83	.	.	.	.	.	.
West South Central	0.89	1.84	2.82	1.64	3.02	2.46	3.73	4.00	.	.
Mountain	1.20	3.68	3.97	2.57	.	.	.	.	.	.
Pacific	0.69	1.68	1.80	1.47	1.82	2.63	2.34	2.43	2.34	.
Type of Practice										
Solo	0.49	1.14	1.16	0.98	1.66	1.52	3.78	1.19	2.43	.
Non-solo	0.33	0.82	0.83	0.79	1.07	1.33	0.85	1.27	1.32	0.99
Location										
Nonmetropolitan	0.93	1.43	3.14	2.06	3.93	3.50	4.32	.	.	.
Metropolitan—										
Less than 1,000,000	0.42	1.02	1.09	0.89	1.46	1.46	1.33	1.28	1.86	1.51
1,000,000 and over	0.39	1.15	0.90	0.95	1.18	1.48	0.98	1.17	1.53	1.45
Employment Status										
Self-employed	0.33	0.81	0.79	0.69	1.08	1.05	1.19	1.09	1.50	1.37
Employee	0.47	1.19	1.18	1.40	1.57	3.17	1.09	1.43	1.82	1.35
Physician Age										
Less than 36 years	0.76	1.32	1.86	1.97	2.83	4.13	2.33	.	2.15	.
36-45 years	0.47	1.20	1.15	0.99	1.59	1.69	1.47	1.69	2.04	2.09
46-55 years	0.54	1.68	1.31	1.14	1.66	1.77	1.49	1.58	2.39	1.68
56-65 years	0.61	1.43	1.64	1.40	1.78	2.15	1.54	1.83	2.41	1.72
66 or more years	0.90	2.00	1.96	2.13	.	3.62	.	2.05	.	.

Table 4. **Mean Number of Hours in Professional Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	57.0	57.6	57.5	57.1	57.7	58.3	58.2
Specialty							
General/Family Practice	57.8	58.7	57.8	58.6	57.9	58.2	58.3
Internal Medicine	59.1	60.1	59.7	58.7	60.1	61.3	61.4
Surgery	56.5	56.1	57.4	56.8	58.1	58.2	59.2
Pediatrics	56.4	58.5	56.9	56.3	58.3	59.8	57.3
Obstetrics/Gynecology	58.3	60.6	60.7	61.5	62.9	60.9	63.4
Radiology	59.4	59.5	56.1	56.2	55.9	57.2	57.1
Psychiatry	50.5	50.9	51.6	51.1	49.2	50.4	49.0
Anesthesiology	61.5	61.5	60.2	58.5	59.4	58.8	58.8
Census Division							
New England	56.4	55.8	56.1	55.7	58.0	58.3	56.0
Middle Atlantic	55.3	56.8	56.7	56.5	56.8	55.2	56.3
East North Central	57.6	59.1	58.0	56.5	57.7	58.4	57.6
West North Central	58.7	57.8	56.6	57.5	57.5	60.3	57.7
South Atlantic	58.4	56.9	57.9	57.2	58.2	60.2	60.4
East South Central	58.7	59.1	61.6	61.4	58.2	60.6	62.1
West South Central	58.0	59.9	59.6	60.1	59.2	61.9	58.7
Mountain	57.4	57.1	58.2	56.2	57.8	59.1	60.4
Pacific	55.0	56.4	55.2	55.5	56.8	55.5	57.1
Type of Practice							
Solo	56.4	57.0	57.4	57.4	57.7	59.0	59.0
Non-solo	57.6	58.0	57.5	56.8	57.6	57.9	57.7
Location							
Nonmetropolitan	60.6	59.6	60.2	59.1	60.5	62.3	61.0
Metropolitan—							
Less than 1,000,000	57.0	58.1	58.1	57.5	58.0	59.6	58.7
1,000,000 and over	56.3	56.7	56.4	56.3	56.8	56.4	57.2
Physician Age							
Less than 36 years	59.5	59.0	60.6	58.0	60.1	60.5	59.7
36-45 years	58.2	58.9	58.7	58.0	58.9	60.2	60.3
46-55 years	57.3	58.7	58.1	58.0	57.6	59.1	58.4
56-65 years	55.4	56.4	55.9	56.9	56.5	56.1	56.9
66 or more years	49.1	47.8	48.9	48.7	51.4	49.3	49.7

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, include physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 4 (continued). **Standard Error of the Mean Number of Hours in Professional Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.28	0.28	0.28	0.26	0.28	0.28	0.27
Specialty							
General/Family Practice	0.70	0.72	0.73	0.68	0.75	0.74	0.68
Internal Medicine	0.78	0.73	0.73	0.74	0.71	0.72	0.68
Surgery	0.55	0.55	0.61	0.58	0.67	0.57	0.62
Pediatrics	0.91	1.07	1.00	0.95	1.00	1.04	0.90
Obstetrics/Gynecology	0.98	1.10	1.03	1.10	1.12	1.07	1.00
Radiology	1.06	1.08	0.96	0.85	0.89	1.02	0.84
Psychiatry	0.83	0.88	0.90	0.83	0.87	0.91	0.87
Anesthesiology	1.21	1.22	1.21	0.88	1.10	1.09	1.16
Census Division							
New England	1.07	1.03	1.11	1.06	1.06	1.15	1.02
Middle Atlantic	0.69	0.73	0.72	0.66	0.71	0.68	0.69
East North Central	0.70	0.72	0.74	0.67	0.71	0.68	0.62
West North Central	0.92	0.98	1.07	0.98	1.01	0.99	0.92
South Atlantic	0.70	0.64	0.65	0.60	0.72	0.71	0.67
East South Central	1.22	1.27	1.23	1.20	1.31	1.20	1.36
West South Central	0.92	0.92	0.81	0.88	0.84	1.03	0.89
Mountain	1.26	1.14	1.33	1.06	1.15	1.02	1.20
Pacific	0.72	0.68	0.69	0.61	0.69	0.64	0.69
Type of Practice							
Solo	0.42	0.44	0.44	0.43	0.46	0.48	0.49
Non-solo	0.39	0.36	0.37	0.32	0.36	0.35	0.33
Location							
Nonmetropolitan	0.87	0.84	0.87	0.79	0.94	0.91	0.93
Metropolitan—							
Less than 1,000,000	0.43	0.42	0.43	0.41	0.43	0.44	0.42
1,000,000 and over	0.41	0.41	0.41	0.38	0.41	0.39	0.39
Physician Age							
Less than 36 years	0.94	0.85	0.83	0.74	0.86	0.86	0.76
36-45 years	0.48	0.48	0.49	0.43	0.44	0.49	0.47
46-55 years	0.53	0.56	0.57	0.54	0.56	0.56	0.54
56-65 years	0.62	0.59	0.59	0.58	0.69	0.59	0.61
66 or more years	0.83	0.84	0.92	0.88	0.97	0.85	0.90

Table 5. **Mean Number of Hours in Patient Care Activities per Week, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	53.1	54.4	56.2	53.8	52.5	59.4	52.3	43.3	52.5	42.4
Census Division										
New England	50.3	51.6	52.4	51.7	.	.	.	45.1	.	.
Middle Atlantic	50.6	51.1	54.5	50.9	50.8	57.9	51.9	41.4	53.6	.
East North Central	52.9	54.6	54.9	54.0	52.9	56.9	48.8	45.9	51.3	46.7
West North Central	53.2	57.7	55.9	50.3	.	.	.	.	.	.
South Atlantic	55.4	54.0	59.3	56.3	55.0	63.4	53.3	42.4	58.2	40.9
East South Central	57.5	60.6	63.5	54.7	.	.	.	.	.	.
West South Central	53.9	56.4	58.6	52.1	53.9	57.7	55.7	46.5	.	.
Mountain	54.9	54.4	58.0	59.1	.	.	.	.	.	.
Pacific	51.5	51.1	54.7	55.1	48.5	58.6	51.5	41.1	48.2	.
Type of Practice										
Solo	54.1	55.2	58.7	54.1	55.4	59.0	51.1	44.3	51.4	.
Non-solo	52.4	53.6	54.7	53.7	51.2	59.8	52.4	41.9	52.8	42.6
Location										
Nonmetropolitan	57.2	59.0	62.7	54.0	58.6	65.9	56.0	.	.	.
Metropolitan—										
Less than 1,000,000	53.7	53.4	58.3	54.7	52.6	60.2	53.3	41.6	54.1	43.5
1,000,000 and over	51.7	52.3	54.2	53.0	51.5	58.2	50.8	44.5	51.0	40.4
Employment Status										
Self-employed	54.8	55.8	58.6	54.7	55.2	59.5	53.5	44.6	53.5	41.0
Employee	48.5	49.7	48.9	49.1	47.8	59.1	50.5	40.6	51.0	43.2
Physician Age										
Less than 36 years	54.9	55.9	55.7	55.2	55.3	60.4	55.3	.	55.4	.
36-45 years	54.9	56.9	58.5	55.6	52.9	61.6	54.6	44.0	53.4	43.2
46-55 years	53.1	54.6	56.3	55.1	52.0	60.6	52.2	43.5	54.4	42.7
56-65 years	52.2	54.9	53.2	53.6	50.8	57.3	50.5	45.3	47.6	42.9
66 or more years	44.7	47.0	49.0	40.9	.	50.2	.	36.0	.	.

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 5 (continued). **Standard Error of the Mean Number of Hours in Patient Care Activities per Week, 1988**[a]

	All Physicians[b]	Specialty								
		GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	0.27	0.66	0.68	0.58	0.89	0.98	0.83	0.84	1.19	1.08
Census Division										
New England	0.96	2.64	1.83	2.77	.	.	.	2.28	.	.
Middle Atlantic	0.68	1.79	1.68	1.50	1.82	2.55	2.59	1.51	2.65	.
East North Central	0.62	1.65	1.50	1.38	2.28	2.33	1.62	1.96	2.01	2.34
West North Central	0.92	1.69	2.27	1.77	.	.	.	.	.	.
South Atlantic	0.66	1.59	1.52	1.42	2.26	2.50	1.86	2.12	2.84	1.94
East South Central	1.31	2.93	3.75	2.53	.	.	.	.	.	.
West South Central	0.87	1.83	2.85	1.53	3.02	2.19	3.34	3.86	.	.
Mountain	1.20	3.57	3.86	2.46	.	.	.	.	.	.
Pacific	0.67	1.59	1.71	1.45	1.87	2.51	2.36	2.30	2.55	.
Type of Practice										
Solo	0.47	1.08	1.14	0.90	1.52	1.47	3.60	1.10	2.51	.
Non-solo	0.33	0.82	0.84	0.75	1.08	1.32	0.85	1.30	1.35	1.13
Location										
Nonmetropolitan	0.89	1.39	2.91	1.88	3.70	3.56	4.15	.	.	.
Metropolitan—										
Less than 1,000,000	0.42	0.98	1.10	0.85	1.45	1.42	1.29	1.34	1.90	1.75
1,000,000 and over	0.38	1.12	0.89	0.87	1.17	1.45	1.03	1.09	1.59	1.57
Employment Status										
Self-employed	0.32	0.79	0.78	0.64	1.01	1.02	1.14	1.02	1.49	1.33
Employee	0.48	1.14	1.25	1.33	1.60	3.12	1.16	1.45	1.96	1.57
Physician Age										
Less than 36 years	0.77	1.44	1.89	1.95	2.73	4.13	2.69	.	2.49	.
36-45 years	0.46	1.20	1.17	0.91	1.56	1.68	1.36	1.60	2.03	2.51
46-55 years	0.53	1.63	1.35	1.07	1.71	1.68	1.56	1.62	2.49	1.65
56-65 years	0.59	1.32	1.56	1.34	1.72	2.10	1.38	1.75	2.48	1.88
66 or more years	0.83	1.86	1.75	1.65	.	3.64	.	1.63	.	.

Table 6. **Mean Number of Hours in Patient Care Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	51.3	51.8	51.5	51.3	52.2	52.9	53.1
Specialty							
General/Family Practice	53.9	54.6	53.3	53.6	53.3	53.7	54.4
Internal Medicine	52.8	53.4	53.0	52.4	54.0	56.0	56.2
Surgery	51.1	50.7	51.5	51.2	52.6	53.0	53.8
Pediatrics	50.3	52.3	51.1	50.6	52.4	53.6	52.5
Obstetrics/Gynecology	53.3	55.8	55.7	56.9	59.0	57.0	59.4
Radiology	54.1	53.8	50.5	51.5	51.6	51.4	52.3
Psychiatry	43.8	44.0	45.2	45.1	43.0	43.9	43.3
Anesthesiology	56.4	59.5	54.9	53.5	55.0	54.0	52.5
Census Division							
New England	50.6	49.3	49.3	49.4	51.4	51.7	50.3
Middle Atlantic	49.3	50.4	50.4	49.8	50.9	49.8	50.6
East North Central	51.7	53.0	51.5	50.8	52.4	52.7	52.9
West North Central	52.5	52.8	50.9	51.9	52.3	55.0	53.2
South Atlantic	52.8	51.2	52.3	51.6	52.6	55.1	55.4
East South Central	53.6	54.5	56.3	56.5	52.9	55.5	57.5
West South Central	53.4	55.3	54.4	54.5	54.4	56.1	53.9
Mountain	52.1	51.5	52.7	51.3	52.3	53.6	54.9
Pacific	48.8	50.5	49.0	49.9	51.5	50.2	51.5
Type of Practice							
Solo	51.1	52.1	51.9	52.1	52.5	53.9	54.1
Non-solo	51.4	51.6	51.1	50.6	51.9	52.2	52.4
Location							
Nonmetropolitan	56.5	55.8	56.4	54.5	55.8	58.1	57.2
Metropolitan—							
Less than 1,000,000	51.6	52.8	52.1	52.0	53.0	54.2	53.7
1,000,000 and over	49.9	50.1	49.9	50.0	50.7	50.6	51.7
Physician Age							
Less than 36 years	53.1	53.5	54.1	52.0	55.0	55.3	54.9
36-45 years	52.1	52.7	52.4	52.2	53.0	54.4	54.9
46-55 years	51.6	52.7	52.0	52.1	52.2	53.6	53.1
56-65 years	50.4	51.2	50.4	51.2	50.9	50.5	52.2
66 or more years	45.1	43.6	44.1	44.0	47.0	45.3	44.7

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 6 (continued). **Standard Error of the Mean Number of Hours in Patient Care Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.28	0.28	0.28	0.26	0.28	0.28	0.27
Specialty							
General/Family Practice	0.69	0.70	0.70	0.66	0.72	0.71	0.66
Internal Medicine	0.77	0.77	0.75	0.74	0.72	0.72	0.68
Surgery	0.52	0.53	0.59	0.56	0.66	0.58	0.58
Pediatrics	0.91	1.06	1.03	0.94	1.00	1.05	0.89
Obstetrics/Gynecology	0.96	1.09	1.00	1.05	1.14	1.01	0.98
Radiology	0.99	1.05	0.88	0.82	0.83	0.96	0.83
Psychiatry	0.82	0.88	0.84	0.82	0.84	0.87	0.84
Anesthesiology	1.23	1.19	1.26	0.95	1.13	1.12	1.19
Census Division							
New England	1.07	1.08	1.12	1.08	1.06	1.07	0.96
Middle Atlantic	0.68	0.74	0.73	0.67	0.70	0.68	0.68
East North Central	0.70	0.71	0.69	0.65	0.72	0.67	0.62
West North Central	0.91	0.99	1.07	0.96	1.01	1.00	0.92
South Atlantic	0.70	0.64	0.66	0.61	0.74	0.72	0.66
East South Central	1.19	1.26	1.19	1.21	1.28	1.23	1.31
West South Central	0.90	0.91	0.81	0.88	0.84	1.02	0.87
Mountain	1.27	1.26	1.31	1.04	1.16	1.01	1.20
Pacific	0.68	0.66	0.68	0.61	0.66	0.63	0.67
Type of Practice							
Solo	0.40	0.43	0.42	0.42	0.45	0.46	0.47
Non-solo	0.39	0.37	0.37	0.33	0.36	0.35	0.33
Location							
Nonmetropolitan	0.86	0.82	0.84	0.78	0.92	0.91	0.89
Metropolitan—							
Less than 1,000,000	0.43	0.42	0.43	0.41	0.43	0.44	0.42
1,000,000 and over	0.40	0.42	0.41	0.38	0.41	0.39	0.38
Physician Age							
Less than 36 years	0.92	0.89	0.84	0.75	0.85	0.84	0.77
36-45 years	0.47	0.49	0.49	0.44	0.45	0.49	0.46
46-55 years	0.53	0.57	0.57	0.53	0.55	0.56	0.53
56-65 years	0.62	0.58	0.57	0.57	0.68	0.58	0.59
66 or more years	0.79	0.80	0.86	0.86	0.98	0.83	0.83

Table 7. **Mean Number of Hours in Direct Patient Care Activities per Week, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	49.5	49.8	50.2	50.2	46.5	55.2
Census Division						
New England	45.8	47.5	46.1	47.6	.	.
Middle Atlantic	46.6	46.4	48.1	47.4	44.2	53.3
East North Central	49.6	50.4	49.7	50.5	46.4	52.7
West North Central	49.2	53.3	50.1	46.7	.	.
South Atlantic	51.6	48.9	53.0	52.3	48.2	58.6
East South Central	54.0	56.4	55.9	51.4	.	.
West South Central	50.1	50.8	52.6	48.4	49.4	54.2
Mountain	53.2	51.2	52.7	55.9	.	.
Pacific	48.2	46.7	48.6	51.5	44.7	54.7
Type of Practice						
Solo	50.5	50.5	52.2	50.3	48.3	54.5
Non-solo	48.8	49.2	48.9	50.1	45.8	55.9
Location						
Nonmetropolitan	54.0	54.7	57.7	51.0	52.8	61.2
Metropolitan—						
Less than 1,000,000	50.2	48.7	52.1	51.2	46.0	56.2
1,000,000 and over	47.8	47.5	48.0	48.9	45.9	53.9
Employment Status						
Self-employed	50.9	51.0	52.3	51.0	48.9	55.1
Employee	45.1	45.9	43.7	45.7	42.5	55.8
Physician Age						
Less than 36 years	50.7	51.5	50.6	51.6	47.6	56.9
36-45 years	51.0	52.4	52.0	52.0	46.5	57.6
46-55 years	50.0	50.5	50.3	51.6	46.8	56.3
56-65 years	49.0	50.2	47.3	49.5	45.9	52.8
66 or more years	41.0	42.0	43.2	37.4	.	45.6

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 7 (continued). **Standard Error of the Mean Number of Hours in Direct Patient Care Activities per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.29	0.63	0.64	0.54	0.81	0.95
Census Division						
New England	1.13	2.48	1.89	2.57	.	.
Middle Atlantic	0.75	1.70	1.59	1.45	1.60	2.52
East North Central	0.70	1.61	1.38	1.30	2.20	2.26
West North Central	0.93	1.68	1.94	1.61	.	.
South Atlantic	0.70	1.50	1.41	1.32	1.90	2.41
East South Central	1.45	2.83	3.76	2.36	.	.
West South Central	0.86	1.68	2.64	1.42	2.90	2.13
Mountain	1.35	3.54	3.76	2.35	.	.
Pacific	0.71	1.44	1.61	1.34	1.89	2.42
Type of Practice						
Solo	0.48	1.03	1.08	0.84	1.33	1.41
Non-solo	0.37	0.79	0.78	0.71	1.00	1.29
Location						
Nonmetropolitan	0.91	1.37	2.49	1.78	3.83	3.37
Metropolitan—						
Less than 1,000,000	0.45	0.90	1.05	0.80	1.23	1.36
1,000,000 and over	0.42	1.07	0.83	0.81	1.09	1.41
Employment Status						
Self-employed	0.34	0.75	0.73	0.60	0.93	0.98
Employee	0.57	1.09	1.22	1.25	1.45	3.09
Physician Age						
Less than 36 years	0.81	1.39	1.77	1.84	2.30	3.99
36-45 years	0.49	1.16	1.10	0.86	1.42	1.64
46-55 years	0.60	1.57	1.26	1.02	1.61	1.67
56-65 years	0.65	1.24	1.50	1.22	1.54	1.91
66 or more years	0.85	1.66	1.61	1.56	.	3.42

Table 8. **Mean Number of Hours in Direct Patient Care Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	47.7	48.0	47.6	47.4	48.5	49.3	49.5
Specialty							
General/Family Practice	50.0	50.2	49.1	49.0	48.9	49.1	49.8
Internal Medicine	47.8	48.0	47.2	46.7	48.2	50.2	50.2
Surgery	47.6	47.4	48.1	48.0	49.2	49.6	50.2
Pediatrics	44.8	46.2	45.0	44.6	46.0	47.2	46.5
Obstetrics/Gynecology	49.2	51.4	50.8	52.6	54.4	53.0	55.2
Census Division							
New England	47.5	45.1	45.2	44.6	46.3	47.3	45.8
Middle Atlantic	44.9	46.2	46.3	45.6	46.2	45.5	46.6
East North Central	48.0	48.9	46.6	46.2	49.0	49.4	49.6
West North Central	50.4	49.6	47.8	47.4	48.0	51.9	49.2
South Atlantic	49.1	47.5	48.7	47.9	49.2	51.4	51.6
East South Central	49.7	51.6	52.9	52.9	50.3	52.2	54.0
West South Central	49.7	51.6	51.1	50.7	50.9	53.2	50.1
Mountain	49.4	47.8	48.7	48.2	48.6	50.3	53.2
Pacific	45.6	46.2	45.2	46.4	48.0	46.7	48.2
Type of Practice							
Solo	47.6	48.3	47.9	48.3	48.8	50.3	50.5
Non-solo	47.9	47.7	47.4	46.5	48.1	48.6	48.8
Location							
Nonmetropolitan	54.0	53.0	53.8	51.4	52.9	54.8	54.0
Metropolitan—							
Less than 1,000,000	48.3	48.9	48.4	48.2	49.3	50.7	50.2
1,000,000 and over	45.9	45.7	45.5	45.7	46.6	46.8	47.8
Physician Age							
Less than 36 years	49.2	50.1	50.3	47.7	51.2	51.8	50.7
36-45 years	48.3	48.7	48.6	48.4	49.2	50.9	51.0
46-55 years	48.4	48.8	48.5	48.1	48.4	49.9	50.0
56-65 years	47.2	47.5	46.3	47.2	47.4	46.9	49.0
66 or more years	41.8	39.8	39.8	40.5	43.4	42.0	41.0

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, include physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 8 (continued). **Standard Error of the Mean Number of Hours in Direct Patient Care Activities per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.31	0.30	0.31	0.29	0.31	0.31	0.29
Specialty							
General/Family Practice	0.66	0.65	0.66	0.60	0.67	0.65	0.63
Internal Medicine	0.73	0.72	0.71	0.69	0.68	0.67	0.64
Surgery	0.49	0.50	0.56	0.53	0.61	0.55	0.54
Pediatrics	0.82	0.99	0.96	0.85	0.88	0.96	0.81
Obstetrics/Gynecology	0.90	1.03	0.91	0.98	1.06	0.98	0.95
Census Division							
New England	1.24	1.07	1.36	1.23	1.19	1.15	1.13
Middle Atlantic	0.73	0.83	0.84	0.75	0.77	0.74	0.75
East North Central	0.75	0.76	0.77	0.73	0.80	0.76	0.70
West North Central	0.98	1.08	1.09	1.10	1.17	1.09	0.93
South Atlantic	0.80	0.67	0.75	0.65	0.82	0.76	0.70
East South Central	1.23	1.32	1.19	1.29	1.35	1.40	1.45
West South Central	0.91	0.90	0.86	0.92	0.88	1.09	0.86
Mountain	1.40	1.40	1.35	1.13	1.24	1.14	1.35
Pacific	0.77	0.69	0.73	0.67	0.71	0.65	0.71
Type of Practice							
Solo	0.43	0.44	0.45	0.44	0.46	0.48	0.48
Non-solo	0.43	0.41	0.43	0.38	0.42	0.40	0.37
Location							
Nonmetropolitan	0.88	0.81	0.82	0.81	0.93	0.91	0.91
Metropolitan—							
Less than 1,000,000	0.47	0.45	0.46	0.44	0.46	0.49	0.45
1,000,000 and over	0.44	0.45	0.47	0.42	0.46	0.42	0.42
Physician Age							
Less than 36 years	0.97	0.96	0.86	0.79	0.94	0.86	0.81
36-45 years	0.53	0.53	0.56	0.48	0.49	0.53	0.49
46-55 years	0.60	0.62	0.64	0.61	0.62	0.63	0.60
56-65 years	0.66	0.58	0.62	0.64	0.77	0.65	0.65
66 or more years	0.86	0.82	0.90	0.89	0.99	0.89	0.85

Table 9. **Mean Number of Office Hours per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	26.7	34.3	27.3	22.0	31.3	29.3
Census Division						
New England	26.0	30.3	28.4	19.7	.	.
Middle Atlantic	23.8	29.9	25.0	18.8	32.9	23.2
East North Central	25.7	33.6	26.7	20.0	30.7	26.6
West North Central	27.2	35.5	26.7	22.3	.	.
South Atlantic	28.1	36.3	27.5	23.6	32.4	32.9
East South Central	28.2	36.1	27.8	24.4	.	.
West South Central	29.2	37.0	30.3	22.7	31.3	32.0
Mountain	27.5	32.3	30.7	24.0	.	.
Pacific	27.2	34.3	28.5	24.6	29.0	28.1
Type of Practice						
Solo	29.5	35.3	30.9	23.0	35.8	29.6
Non-solo	24.8	33.4	25.1	21.1	29.3	29.1
Location						
Nonmetropolitan	30.7	35.4	33.7	22.0	37.6	35.9
Metropolitan—						
Less than 1,000,000	26.6	34.2	27.5	22.3	30.8	29.6
1,000,000 and over	26.0	33.6	26.6	21.7	30.7	28.5
Employment Status						
Self-employed	28.7	35.2	29.5	22.7	36.3	29.8
Employee	20.7	31.1	20.8	18.6	22.7	26.5
Physician Age						
Less than 36 years	26.2	35.2	25.0	22.0	31.3	29.7
36-45 years	25.8	34.4	26.4	21.9	31.0	29.2
46-55 years	26.5	34.8	28.5	22.5	31.6	30.9
56-65 years	28.7	35.6	29.7	21.9	31.1	27.5
66 or more years	27.2	30.6	28.2	20.9	.	27.8

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 9 (continued). **Standard Error of the Mean Number of Office Hours per Week, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.26	0.49	0.52	0.41	0.88	0.60
Census Division						
New England	1.06	2.40	1.89	1.56	.	.
Middle Atlantic	0.62	1.60	1.11	0.97	2.03	1.33
East North Central	0.64	0.95	1.25	0.93	2.27	1.38
West North Central	0.87	1.17	1.68	1.43	.	.
South Atlantic	0.62	1.39	1.15	0.95	2.09	1.35
East South Central	1.14	1.85	2.37	1.59	.	.
West South Central	0.78	1.23	2.14	1.15	2.72	1.72
Mountain	1.19	2.20	2.95	1.74	.	.
Pacific	0.73	1.24	1.48	1.30	2.19	1.52
Type of Practice						
Solo	0.36	0.72	0.75	0.60	1.03	0.82
Non-solo	0.36	0.66	0.68	0.55	1.16	0.87
Location						
Nonmetropolitan	0.78	0.90	1.85	1.37	2.90	2.18
Metropolitan—						
Less than 1,000,000	0.39	0.79	0.81	0.58	1.32	0.76
1,000,000 and over	0.39	0.85	0.71	0.62	1.27	0.95
Employment Status						
Self-employed	0.27	0.50	0.53	0.43	0.80	0.56
Employee	0.63	1.22	1.22	1.13	1.73	2.60
Physician Age						
Less than 36 years	0.76	1.13	1.39	1.22	2.72	2.50
36-45 years	0.46	0.89	0.88	0.70	1.57	1.16
46-55 years	0.53	1.10	1.04	0.78	1.71	1.02
56-65 years	0.58	1.12	1.32	0.88	1.66	0.91
66 or more years	0.70	1.18	1.25	1.30	.	2.26

Table 10. **Mean Number of Office Hours per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	26.5	26.3	24.9	25.3	26.2	26.8	26.7
Specialty							
General/Family Practice	33.3	33.2	32.4	32.9	33.9	34.2	34.3
Internal Medicine	26.9	25.6	24.2	24.8	25.8	27.0	27.3
Surgery	21.7	21.6	21.2	21.9	22.1	23.2	22.0
Pediatrics	31.9	32.3	29.4	29.1	31.4	30.8	31.3
Obstetrics/Gynecology	26.8	27.5	25.9	28.4	28.1	28.1	29.3
Census Division							
New England	25.8	25.1	24.2	23.7	25.0	26.2	26.0
Middle Atlantic	24.4	23.3	22.8	23.5	24.3	23.8	23.8
East North Central	25.0	25.1	22.7	23.9	24.5	25.0	25.7
West North Central	26.5	27.5	24.9	26.1	27.0	27.8	27.2
South Atlantic	26.9	26.8	26.2	26.3	26.4	27.7	28.1
East South Central	27.0	28.9	28.7	28.6	27.6	28.2	28.2
West South Central	29.4	28.8	26.3	26.6	28.4	30.6	29.2
Mountain	28.2	26.7	26.5	25.5	27.1	27.4	27.5
Pacific	27.7	27.1	25.3	26.0	27.9	27.2	27.3
Type of Practice							
Solo	27.5	28.0	27.0	28.0	28.6	29.9	29.5
Non-solo	25.5	24.9	23.0	23.0	24.4	24.5	24.8
Location							
Nonmetropolitan	29.7	30.2	29.8	28.9	30.2	30.8	30.7
Metropolitan—							
Less than 1,000,000	26.7	26.5	24.9	25.6	26.4	27.1	26.6
1,000,000 and over	25.6	25.2	23.8	24.3	25.2	25.6	26.0
Physician Age							
Less than 36 years	25.6	26.0	24.9	22.9	26.5	25.7	26.2
36-45 years	25.4	25.1	23.1	24.1	25.1	26.0	25.8
46-55 years	27.4	27.2	26.0	25.9	26.4	26.9	26.5
56-65 years	27.8	28.0	27.2	27.9	28.3	28.9	28.7
66 or more years	27.3	26.2	24.6	26.6	26.2	26.6	27.2

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, include physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 10 (continued). **Standard Error of the Mean Number of Office Hours per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.26	0.25	0.26	0.26	0.26	0.27	0.26
Specialty							
General/Family Practice	0.43	0.47	0.46	0.45	0.48	0.51	0.49
Internal Medicine	0.59	0.56	0.57	0.61	0.57	0.51	0.52
Surgery	0.38	0.41	0.41	0.44	0.42	0.44	0.41
Pediatrics	0.79	0.78	0.83	0.85	0.87	0.98	0.88
Obstetrics/Gynecology	0.52	0.57	0.60	0.59	0.64	0.55	0.60
Census Division							
New England	1.12	0.96	1.19	1.23	1.13	1.09	1.06
Middle Atlantic	0.66	0.58	0.67	0.63	0.64	0.64	0.62
East North Central	0.63	0.61	0.61	0.64	0.66	0.67	0.64
West North Central	0.90	0.89	0.93	0.95	1.00	0.88	0.87
South Atlantic	0.61	0.62	0.60	0.60	0.67	0.66	0.62
East South Central	1.02	1.07	1.09	1.21	1.08	1.12	1.14
West South Central	0.81	0.78	0.79	0.83	0.80	0.85	0.78
Mountain	1.27	1.16	1.23	1.22	1.11	1.15	1.19
Pacific	0.62	0.61	0.63	0.66	0.63	0.64	0.73
Type of Practice							
Solo	0.35	0.34	0.33	0.34	0.35	0.36	0.36
Non-solo	0.38	0.37	0.39	0.38	0.38	0.37	0.36
Location							
Nonmetropolitan	0.68	0.63	0.64	0.66	0.69	0.69	0.78
Metropolitan—							
Less than 1,000,000	0.40	0.40	0.40	0.42	0.41	0.41	0.39
1,000,000 and over	0.38	0.38	0.39	0.38	0.39	0.39	0.39
Physician Age							
Less than 36 years	0.81	0.82	0.81	0.80	0.86	0.87	0.76
36-45 years	0.48	0.48	0.47	0.45	0.43	0.46	0.46
46-55 years	0.52	0.53	0.54	0.53	0.53	0.56	0.53
56-65 years	0.53	0.47	0.51	0.60	0.62	0.56	0.58
66 or more years	0.61	0.65	0.66	0.65	0.75	0.70	0.70

Table 11. **Mean Number of Hours on Hospital Rounds per Week, 1988[a]**

		Specialty				
	All Physicians[b]	General & Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	9.0	6.6	14.4	8.1	8.5	6.3
Census Division						
New England	7.6	7.8	10.0	7.7	.	.
Middle Atlantic	10.2	7.6	15.7	9.0	6.7	8.1
East North Central	9.7	8.6	15.4	8.0	10.8	5.7
West North Central	9.4	7.3	17.1	6.5	.	.
South Atlantic	9.4	5.0	15.6	8.9	7.8	6.8
East South Central	10.1	8.0	19.3	7.8	.	.
West South Central	8.1	6.4	13.7	7.6	8.1	5.7
Mountain	7.6	5.3	13.4	7.7	.	.
Pacific	7.1	4.4	10.5	7.7	8.8	5.8
Type of Practice						
Solo	9.1	6.7	14.3	8.4	7.3	6.8
Non-solo	8.9	6.6	14.5	7.8	9.0	5.9
Location						
Nonmetropolitan	8.2	7.0	14.4	8.8	7.8	6.3
Metropolitan—						
Less than 1,000,000	8.8	6.5	15.0	7.9	9.7	6.3
1,000,000 and over	9.3	6.6	14.0	8.2	7.8	6.4
Employment Status						
Self-employed	9.4	7.0	15.0	8.4	7.2	6.2
Employee	7.8	5.3	12.5	6.7	10.8	7.0
Physician Age						
Less than 36 years	9.4	5.8	14.7	7.7	9.9	7.0
36-45 years	10.0	8.0	16.0	8.5	8.1	6.7
46-55 years	9.2	6.0	14.6	8.4	10.2	5.6
56-65 years	7.8	6.8	11.2	8.1	6.1	6.9
66 or more years	5.8	4.7	9.6	5.6	.	6.0

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 11 (continued). **Standard Error of the Mean Number of Hours on Hospital Rounds per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.18	0.28	0.48	0.25	0.62	0.29
Census Division						
New England	0.53	1.47	1.14	0.85	.	.
Middle Atlantic	0.51	1.23	1.16	0.74	0.83	1.09
East North Central	0.42	0.75	1.14	0.57	1.45	0.41
West North Central	0.62	0.71	1.92	0.74	.	.
South Atlantic	0.42	0.57	1.08	0.62	0.76	0.70
East South Central	0.97	1.02	3.34	1.18	.	.
West South Central	0.52	0.64	1.95	0.67	2.22	0.59
Mountain	0.66	0.95	2.46	0.78	.	.
Pacific	0.43	0.54	0.92	0.74	2.35	0.65
Type of Practice						
Solo	0.27	0.41	0.74	0.38	0.59	0.42
Non-solo	0.24	0.39	0.62	0.33	0.84	0.40
Location						
Nonmetropolitan	0.42	0.50	1.75	0.88	1.27	0.72
Metropolitan—						
Less than 1,000,000	0.27	0.41	0.82	0.35	1.08	0.39
1,000,000 and over	0.27	0.57	0.61	0.39	0.81	0.47
Employment Status						
Self-employed	0.20	0.30	0.54	0.28	0.58	0.27
Employee	0.38	0.68	0.98	0.47	1.36	1.29
Physician Age						
Less than 36 years	0.56	0.49	1.48	0.66	2.40	1.52
36-45 years	0.32	0.55	0.82	0.46	0.86	0.57
46-55 years	0.39	0.62	0.99	0.48	1.50	0.40
56-65 years	0.31	0.59	0.92	0.52	0.67	0.57
66 or more years	0.42	0.83	0.97	0.69	.	0.78

Table 12. **Mean Number of Hours on Hospital Rounds per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	9.5	10.0	8.5	8.3	8.8	8.8	9.0
Specialty							
General/Family Practice	8.4	8.5	6.7	6.7	6.4	6.3	6.6
Internal Medicine	14.7	16.1	13.3	13.4	14.4	14.7	14.4
Surgery	9.7	9.1	8.1	7.2	7.8	7.7	8.1
Pediatrics	8.2	9.5	7.6	7.9	8.7	9.1	8.5
Obstetrics/Gynecology	6.6	6.5	6.4	5.5	6.4	5.5	6.3
Census Division							
New England	9.1	9.7	7.1	7.5	7.7	8.0	7.6
Middle Atlantic	9.4	10.5	9.0	9.6	9.7	9.4	10.2
East North Central	10.4	12.1	9.0	9.3	10.4	9.8	9.7
West North Central	10.7	10.8	9.1	7.8	8.3	9.3	9.4
South Atlantic	10.0	9.6	8.7	7.9	9.1	9.3	9.4
East South Central	10.7	10.9	9.3	8.9	9.0	10.2	10.1
West South Central	9.6	10.6	9.4	9.3	8.7	9.5	8.1
Mountain	8.8	8.1	7.4	7.0	7.4	6.8	7.6
Pacific	7.5	8.0	7.1	6.7	7.0	6.6	7.1
Type of Practice							
Solo	9.5	9.8	8.1	8.3	8.8	8.8	9.1
Non-solo	9.5	10.2	8.9	8.3	8.9	8.9	8.9
Location							
Nonmetropolitan	10.9	10.9	8.6	7.6	7.9	8.5	8.2
Metropolitan—							
Less than 1,000,000	10.1	10.1	8.7	8.4	9.2	9.3	8.8
1,000,000 and over	8.6	9.8	8.3	8.4	8.7	8.5	9.3
Physician Age							
Less than 36 years	10.8	12.0	9.2	8.2	9.4	9.9	9.4
36-45 years	10.0	10.9	9.7	9.3	9.8	9.9	10.0
46-55 years	9.4	9.9	8.6	8.8	8.9	8.9	9.2
56-65 years	8.8	8.9	7.1	7.1	7.5	7.2	7.8
66 or more years	6.9	6.2	5.2	5.9	6.4	5.9	5.8

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 12 (continued). **Standard Error of the Mean Number of Hours on Hospital Rounds per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.17	0.18	0.16	0.17	0.18	0.18	0.18
Specialty							
General/Family Practice	0.28	0.27	0.25	0.26	0.26	0.25	0.28
Internal Medicine	0.51	0.53	0.49	0.52	0.50	0.47	0.48
Surgery	0.27	0.26	0.25	0.24	0.27	0.25	0.25
Pediatrics	0.41	0.67	0.41	0.51	0.55	0.60	0.62
Obstetrics/Gynecology	0.28	0.27	0.25	0.23	0.32	0.22	0.29
Census Division							
New England	0.72	0.69	0.58	0.64	0.74	0.67	0.53
Middle Atlantic	0.45	0.48	0.45	0.48	0.48	0.48	0.51
East North Central	0.42	0.55	0.41	0.44	0.53	0.45	0.42
West North Central	0.63	0.57	0.57	0.58	0.66	0.66	0.62
South Atlantic	0.45	0.42	0.41	0.35	0.45	0.45	0.42
East South Central	0.64	0.70	0.57	0.64	0.63	0.80	0.97
West South Central	0.55	0.54	0.50	0.57	0.50	0.59	0.52
Mountain	0.77	0.66	0.55	0.60	0.59	0.53	0.66
Pacific	0.38	0.42	0.39	0.37	0.36	0.35	0.43
Type of Practice							
Solo	0.24	0.25	0.21	0.24	0.26	0.25	0.27
Non-solo	0.25	0.27	0.24	0.23	0.25	0.25	0.24
Location							
Nonmetropolitan	0.47	0.44	0.39	0.38	0.40	0.45	0.42
Metropolitan—							
Less than 1,000,000	0.28	0.28	0.25	0.25	0.28	0.28	0.27
1,000,000 and over	0.24	0.28	0.25	0.26	0.27	0.26	0.27
Physician Age							
Less than 36 years	0.56	0.72	0.49	0.45	0.62	0.68	0.56
36-45 years	0.34	0.34	0.33	0.31	0.32	0.33	0.32
46-55 years	0.32	0.36	0.33	0.37	0.36	0.35	0.39
56-65 years	0.33	0.30	0.25	0.30	0.33	0.28	0.31
66 or more years	0.39	0.35	0.32	0.39	0.40	0.39	0.42

Table 13. **Mean Number of Hours in Surgery per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	6.5	1.8	1.8	15.7	1.6	16.9
Census Division						
New England	5.4	2.7	0.3	15.2	.	.
Middle Atlantic	5.9	0.3	1.6	15.0	1.0	18.6
East North Central	7.0	2.1	1.8	18.0	1.3	18.0
West North Central	6.1	2.9	0.5	13.9	.	.
South Atlantic	6.9	0.6	2.8	15.6	2.0	16.5
East South Central	5.8	1.9	1.7	14.2	.	.
West South Central	6.8	2.1	2.0	14.2	1.8	13.9
Mountain	8.8	3.9	4.6	17.9	.	.
Pacific	6.1	2.3	1.0	15.8	2.0	17.4
Type of Practice						
Solo	7.0	2.1	1.3	14.7	1.5	16.2
Non-solo	6.2	1.6	2.1	16.6	1.6	17.5
Location						
Nonmetropolitan	5.3	2.6	1.9	14.0	1.6	16.2
Metropolitan—						
Less than 1,000,000	7.3	1.6	2.5	16.9	1.6	17.5
1,000,000 and over	6.1	1.4	1.2	14.8	1.6	16.5
Employment Status						
Self-employed	7.4	2.1	1.8	15.9	1.6	17.0
Employee	4.0	0.8	1.7	14.7	1.5	16.1
Physician Age						
Less than 36 years	4.6	1.6	2.3	14.8	1.8	19.9
36-45 years	6.7	2.1	2.5	17.4	1.4	18.2
46-55 years	7.7	1.7	1.2	16.1	1.6	17.1
56-65 years	6.7	1.6	0.7	15.4	1.7	15.8
66 or more years	3.9	1.8	0.2	8.6	.	11.1

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 13 (continued). **Standard Error of the Mean Number of Hours in Surgery per Week, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.18	0.15	0.23	0.36	0.20	0.67
Census Division						
New England	0.68	1.03	0.22	1.34	.	.
Middle Atlantic	0.46	0.17	0.51	0.92	0.26	1.96
East North Central	0.49	0.45	0.59	1.02	0.45	1.62
West North Central	0.59	0.42	0.29	1.14	.	.
South Atlantic	0.44	0.22	0.64	0.85	0.74	1.50
East South Central	0.70	0.54	1.33	1.31	.	.
West South Central	0.52	0.40	1.02	0.96	0.51	1.72
Mountain	0.86	1.20	1.81	1.55	.	.
Pacific	0.47	0.40	0.40	0.99	0.53	1.74
Type of Practice						
Solo	0.30	0.28	0.32	0.52	0.25	1.07
Non-solo	0.23	0.17	0.32	0.50	0.27	0.85
Location						
Nonmetropolitan	0.41	0.29	1.23	0.86	0.49	1.51
Metropolitan—						
Less than 1,000,000	0.29	0.23	0.44	0.55	0.25	1.00
1,000,000 and over	0.27	0.28	0.25	0.54	0.32	1.01
Employment Status						
Self-employed	0.22	0.19	0.26	0.41	0.24	0.73
Employee	0.29	0.19	0.51	0.73	0.35	1.70
Physician Age						
Less than 36 years	0.42	0.30	0.69	1.03	0.66	2.60
36-45 years	0.32	0.27	0.48	0.65	0.27	1.20
46-55 years	0.39	0.49	0.33	0.64	0.35	1.25
56-65 years	0.41	0.30	0.41	0.80	0.66	1.29
66 or more years	0.42	0.42	0.16	1.09	.	1.64

Table 14. **Mean Number of Hours in Surgery per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	5.5	6.0	5.5	5.6	6.2	6.2	6.5
Specialty							
General/Family Practice	2.2	2.5	2.0	1.7	1.9	1.8	1.8
Internal Medicine	0.7	1.1	1.3	1.4	1.6	2.0	1.8
Surgery	13.0	13.8	13.1	13.4	14.6	14.6	15.7
Pediatrics	0.8	1.0	1.2	0.9	1.2	1.5	1.6
Obstetrics/Gynecology	13.6	15.8	13.6	14.6	17.1	15.8	16.9
Census Division							
New England	5.2	5.0	4.6	4.7	5.2	5.5	5.4
Middle Atlantic	4.9	6.3	5.1	5.4	5.6	5.2	5.9
East North Central	5.9	6.2	6.1	5.3	6.9	7.4	7.0
West North Central	6.8	6.1	7.0	5.9	6.1	6.8	6.1
South Atlantic	5.6	5.7	5.4	6.0	5.9	6.2	6.9
East South Central	6.0	6.2	5.6	6.7	6.3	5.5	5.8
West South Central	5.7	6.9	6.1	5.9	6.3	6.0	6.8
Mountain	5.8	5.8	5.4	6.8	6.8	7.6	8.8
Pacific	4.8	5.9	5.0	5.2	6.5	6.1	6.1
Type of Practice							
Solo	5.1	6.1	5.6	5.6	6.0	6.4	7.0
Non-solo	6.0	6.0	5.5	5.7	6.4	6.1	6.2
Location							
Nonmetropolitan	5.6	5.8	5.5	5.5	5.6	5.6	5.3
Metropolitan—							
Less than 1,000,000	5.5	6.5	6.2	6.1	6.7	6.4	7.3
1,000,000 and over	5.5	5.7	5.0	5.3	5.9	6.1	6.1
Physician Age							
Less than 36 years	3.8	4.3	4.0	3.9	5.6	5.5	4.6
36-45 years	6.3	6.6	6.0	6.2	6.3	6.3	6.7
46-55 years	6.4	7.0	6.5	6.8	7.5	7.9	7.7
56-65 years	5.5	6.1	5.5	5.3	5.7	5.3	6.7
66 or more years	3.3	3.2	3.5	3.0	4.1	3.8	3.9

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, include physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 14 (continued). **Standard Error of the Mean Number of Hours in Surgery per Week, 1982-1988**[a]

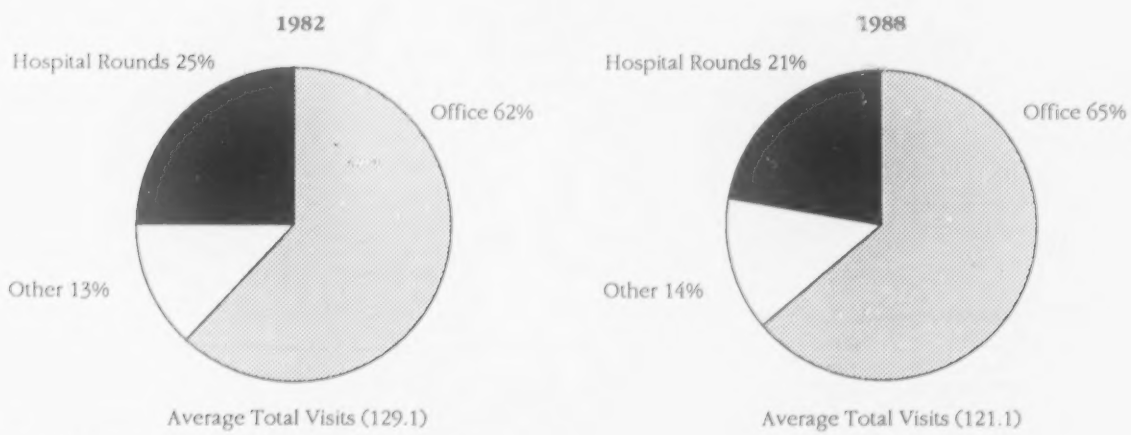
	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.16	0.17	0.16	0.16	0.18	0.18	0.18
Specialty							
General/Family Practice	0.16	0.16	0.17	0.13	0.15	0.14	0.15
Internal Medicine	0.12	0.19	0.23	0.24	0.25	0.24	0.23
Surgery	0.32	0.33	0.31	0.33	0.38	0.35	0.36
Pediatrics	0.13	0.12	0.17	0.11	0.15	0.19	0.20
Obstetrics/Gynecology	0.60	0.64	0.48	0.55	0.69	0.65	0.67
Census Division							
New England	0.68	0.69	0.61	0.68	0.75	0.73	0.68
Middle Atlantic	0.41	0.52	0.42	0.40	0.47	0.42	0.46
East North Central	0.42	0.40	0.40	0.37	0.52	0.52	0.49
West North Central	0.64	0.54	0.66	0.62	0.67	0.70	0.59
South Atlantic	0.41	0.41	0.35	0.38	0.42	0.42	0.44
East South Central	0.73	0.63	0.60	0.82	0.72	0.68	0.70
West South Central	0.49	0.51	0.51	0.52	0.47	0.46	0.52
Mountain	0.69	0.74	0.62	0.79	0.79	0.84	0.86
Pacific	0.36	0.39	0.36	0.35	0.45	0.43	0.47
Type of Practice							
Solo	0.21	0.24	0.22	0.23	0.25	0.25	0.30
Non-solo	0.26	0.24	0.22	0.23	0.26	0.25	0.23
Location							
Nonmetropolitan	0.40	0.40	0.39	0.46	0.46	0.44	0.41
Metropolitan—							
Less than 1,000,000	0.25	0.26	0.25	0.26	0.28	0.28	0.29
1,000,000 and over	0.25	0.26	0.23	0.22	0.28	0.27	0.27
Physician Age							
Less than 36 years	0.37	0.41	0.37	0.38	0.58	0.53	0.42
36-45 years	0.32	0.32	0.30	0.29	0.29	0.31	0.32
46-55 years	0.35	0.38	0.35	0.37	0.40	0.40	0.39
56-65 years	0.36	0.35	0.32	0.34	0.42	0.34	0.41
66 or more years	0.31	0.33	0.34	0.32	0.46	0.41	0.42

Utilization of Physician Services

Utilization of physician services refers to the quantity of services provided by physicians to their patients. The number of patient visits is a measure that captures a large proportion of the overall utilization of physician services. In the statistics that follow, total visits are decomposed into office visits, visits on hospital rounds, and other visits. Other visits include those in hospital emergency rooms and outpatient clinics, nursing homes, extended care facilities, and all other settings.

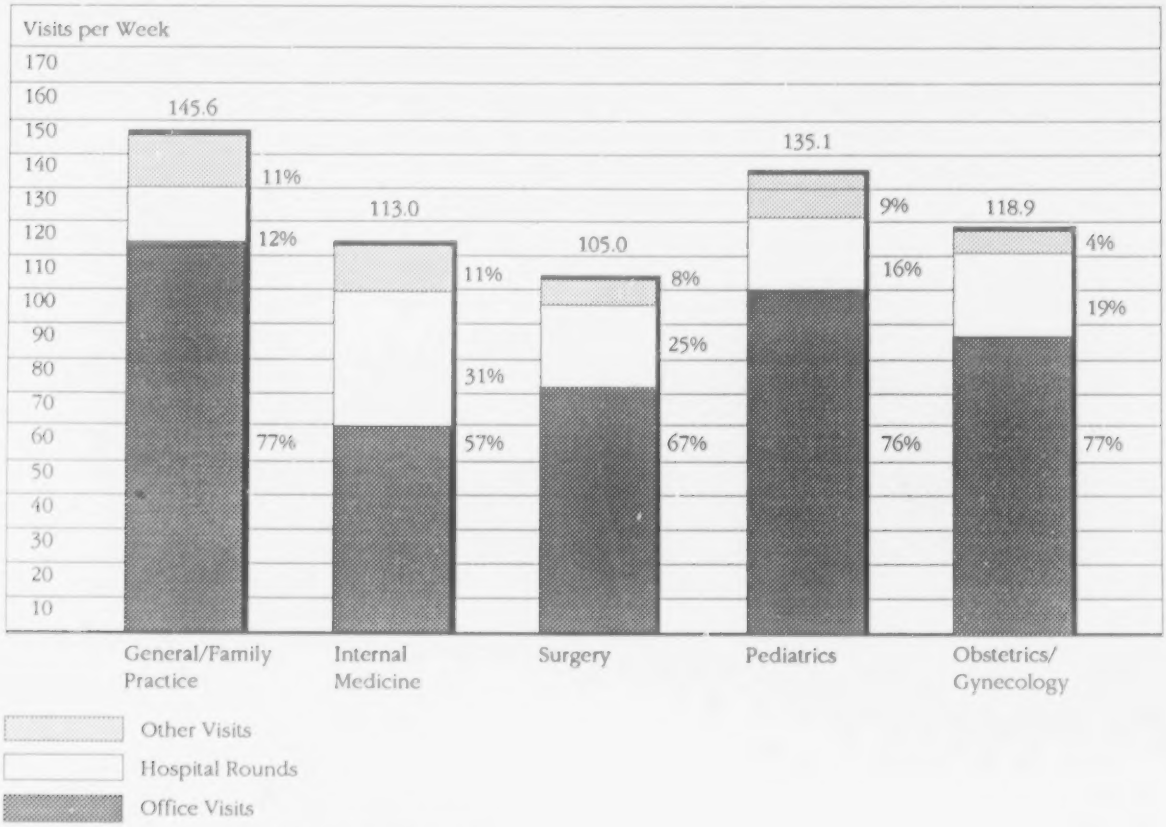
As shown in Figure 4, the average number of patient visits per physician per week was 121.1 in 1988. This represents a 6.2% decrease from 129.1 visits per week in 1982. The distribution of visits showed a slight shift toward more visits in the office and other settings and away from inpatient visits. Figure 5 indicates how the average number and distribution of visits differ across specialties. Similarly, Figure 6 indicates wide differences in the number of weekly visits per physician across geographic areas, ranging from 105.0 to 158.4, respectively, in the New England and East South Central Census Divisions.

Figure 4. **Distribution of Average Total Patient Visits per Week of All Physicians, 1982 and 1988[a]**



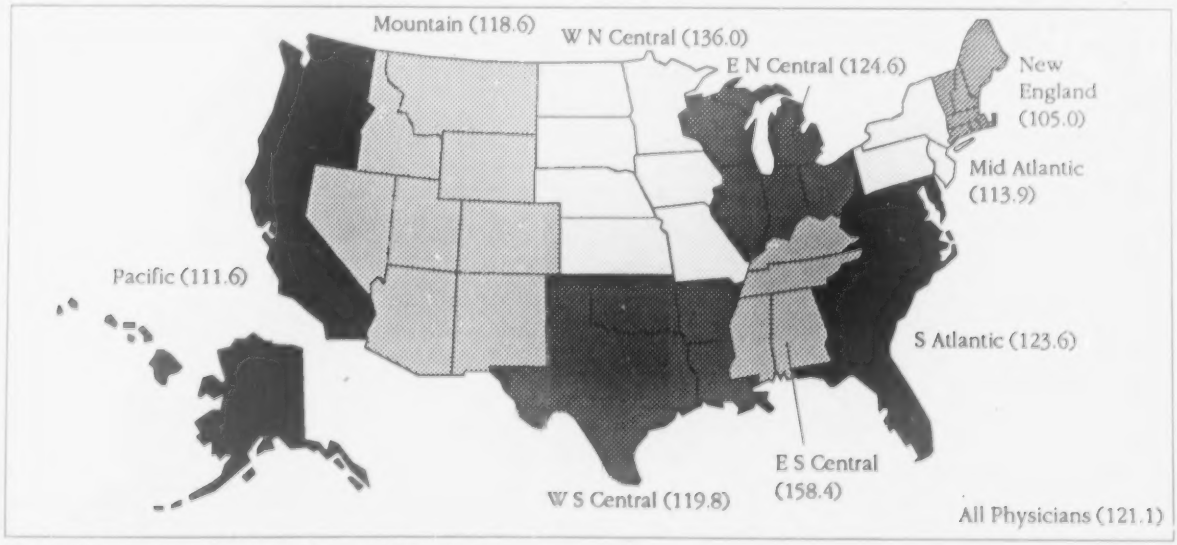
Source: AMA Socioeconomic Monitoring System 1982 and 1988 core surveys.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 5. **Distribution of Average Total Patient Visits per Week, by Specialty, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 6. **Average Total Patient Visits per Physician per Week, by Census Division, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Table 15. **Mean Number of Total Patient Visits per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	121.1	145.6	113.0	105.0	135.1	118.9
Census Division						
New England	105.0	129.3	107.0	90.7	.	.
Middle Atlantic	113.9	135.2	113.5	101.0	138.3	107.0
East North Central	124.6	152.2	113.4	106.5	136.0	128.6
West North Central	136.0	165.6	122.4	113.5	.	.
South Atlantic	123.6	134.7	113.7	106.0	143.7	134.7
East South Central	158.4	204.9	146.8	120.0	.	.
West South Central	119.8	139.5	109.1	110.5	134.2	116.2
Mountain	118.6	139.5	112.2	104.5	.	.
Pacific	111.6	127.9	104.3	97.9	134.1	105.7
Type of Practice						
Solo	115.6	142.6	112.7	94.8	136.6	114.6
Non-solo	124.9	148.2	113.1	114.2	134.4	123.3
Location						
Nonmetropolitan	153.3	170.4	165.4	115.1	146.6	155.1
Metropolitan—						
Less than 1,000,000	127.1	148.2	117.8	114.7	143.9	126.9
1,000,000 and over	108.8	124.3	104.5	93.1	127.0	109.0
Employment Status						
Self-employed	124.7	153.1	118.1	106.1	153.7	121.0
Employee	110.6	122.0	97.4	99.1	103.5	105.4
Physician Age						
Less than 36 years	121.3	147.6	104.3	112.6	136.7	118.9
36-45 years	124.8	152.9	119.4	109.2	123.9	128.0
46-55 years	124.1	150.4	116.9	112.1	145.6	121.1
56-65 years	119.5	147.9	103.4	99.7	148.9	109.9
66 or more years	100.2	121.9	96.5	69.7	.	99.4

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 15 (continued). **Standard Error of the Mean Number of Total Patient Visits per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	1.28	2.94	2.36	2.16	4.00	3.45
Census Division						
New England	3.95	9.15	7.76	7.62	.	.
Middle Atlantic	2.91	8.02	5.09	5.16	12.10	7.29
East North Central	3.23	7.52	5.37	5.53	9.13	8.83
West North Central	5.41	7.48	7.50	9.56	.	.
South Atlantic	3.28	6.11	6.32	5.14	9.10	9.89
East South Central	7.19	16.26	14.05	7.65	.	.
West South Central	3.46	6.64	8.59	6.18	10.60	11.54
Mountain	5.21	15.50	11.82	8.74	.	.
Pacific	2.83	6.20	5.08	5.86	9.39	6.40
Type of Practice						
Solo	2.06	5.20	3.76	2.90	6.56	4.49
Non-solo	1.63	3.34	3.03	3.08	4.97	5.17
Location						
Nonmetropolitan	4.52	5.93	18.04	7.01	14.34	21.46
Metropolitan—						
Less than 1,000,000	2.01	4.80	3.53	3.34	7.09	5.00
1,000,000 and over	1.68	4.17	2.85	2.90	4.96	4.23
Employment Status						
Self-employed	1.47	3.58	2.78	2.25	4.80	3.61
Employee	2.50	4.52	4.15	6.43	6.06	10.63
Physician Age						
Less than 36 years	3.25	6.03	5.21	8.45	12.33	11.03
36-45 years	2.07	4.22	4.43	3.70	5.85	6.80
46-55 years	2.74	7.51	4.85	4.12	8.40	6.39
56-65 years	3.00	6.34	4.68	4.41	9.30	5.68
66 or more years	4.51	11.09	6.07	4.95	.	9.02

Table 16. **Mean Number of Total Patient Visits per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	129.1	123.4	118.1	117.1	117.7	119.3	121.1
Specialty							
General/Family Practice	161.3	148.4	139.0	138.1	139.2	138.3	145.6
Internal Medicine	117.0	113.4	107.7	105.2	111.1	114.5	113.0
Surgery	113.1	111.9	110.0	108.2	105.8	107.8	105.0
Pediatrics	134.4	137.4	128.7	130.8	131.9	127.4	135.1
Obstetrics/Gynecology	126.6	118.2	115.7	112.0	114.8	112.7	118.9
Census Division							
New England	129.1	113.3	108.7	98.2	109.5	112.0	105.0
Middle Atlantic	120.2	121.5	114.4	110.9	110.3	109.5	113.9
East North Central	135.1	127.5	123.1	122.6	121.3	125.7	124.6
West North Central	137.7	141.3	128.6	117.6	122.0	128.9	136.0
South Atlantic	131.2	123.4	119.9	122.3	118.9	122.3	123.6
East South Central	150.4	149.8	153.8	157.5	148.9	151.1	158.4
West South Central	139.9	138.6	132.6	127.5	126.3	125.7	119.8
Mountain	128.3	121.1	114.2	109.9	111.2	115.0	118.6
Pacific	112.3	100.9	94.7	102.4	107.4	104.2	111.6
Type of Practice							
Solo	123.8	116.7	113.7	112.3	112.2	114.0	115.6
Non-solo	134.8	129.1	122.3	121.2	122.0	123.2	124.9
Location							
Nonmetropolitan	166.9	153.3	150.3	144.0	140.0	141.5	153.3
Metropolitan—							
Less than 1,000,000	134.8	131.6	125.6	123.7	124.1	127.6	127.1
1,000,000 and over	115.3	107.8	104.1	105.6	106.7	106.6	108.8
Physician Age							
Less than 36 years	118.4	115.5	118.3	115.6	121.6	118.4	121.3
36-45 years	130.3	125.1	116.0	118.4	119.4	124.3	124.8
46-55 years	137.3	131.6	128.4	119.9	120.8	122.0	124.1
56-65 years	133.1	127.3	121.1	121.9	113.6	115.7	119.5
66 or more years	112.8	95.0	91.7	94.9	104.1	96.2	100.2

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 16 (continued). **Standard Error of the Mean Number of Total Patient Visits per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	1.45	1.47	1.30	1.27	1.32	1.22	1.28
Specialty							
General/Family Practice	3.30	3.16	3.13	2.79	2.97	2.93	2.94
Internal Medicine	3.08	2.79	2.80	2.99	3.11	2.50	2.36
Surgery	2.14	2.34	2.16	2.18	2.27	2.03	2.16
Pediatrics	4.05	4.74	3.97	3.68	4.09	3.67	4.00
Obstetrics/Gynecology	3.73	3.82	3.13	2.98	3.19	3.11	3.45
Census Division							
New England	5.89	4.35	5.16	4.25	4.80	4.28	3.95
Middle Atlantic	3.54	4.51	3.45	3.49	2.83	2.67	2.91
East North Central	3.31	3.34	3.29	3.32	3.24	3.30	3.23
West North Central	4.97	5.97	5.03	3.92	4.08	4.03	5.41
South Atlantic	3.57	3.09	2.85	2.91	3.78	3.21	3.28
East South Central	7.03	7.53	6.68	7.09	7.86	5.91	7.19
West South Central	5.09	4.58	4.00	4.07	3.94	4.14	3.46
Mountain	5.64	9.14	5.36	4.61	4.62	4.60	5.21
Pacific	3.29	2.43	2.41	2.40	2.79	2.38	2.83
Type of Practice							
Solo	1.94	1.96	1.85	1.83	1.76	1.75	2.06
Non-solo	2.14	2.14	1.81	1.75	1.89	1.67	1.63
Location							
Nonmetropolitan	4.92	4.32	4.14	4.29	3.91	3.78	4.52
Metropolitan—							
Less than 1,000,000	2.22	2.44	2.01	1.99	2.22	2.02	2.01
1,000,000 and over	1.93	1.84	1.74	1.69	1.68	1.54	1.68
Physician Age							
Less than 36 years	3.56	3.43	3.40	3.08	3.61	3.07	3.25
36-45 years	2.55	2.81	2.27	2.18	2.00	2.04	2.07
46-55 years	3.16	3.31	2.85	2.80	3.07	2.77	2.74
56-65 years	3.27	2.86	2.80	3.00	3.11	2.57	3.00
66 or more years	3.98	3.17	3.41	3.33	4.22	3.61	4.51

Table 17. **Mean Number of Office Visits per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	79.2	112.3	64.9	70.2	102.2	91.4
Census Division						
New England	69.2	85.1	68.0	60.4	.	.
Middle Atlantic	70.4	92.6	63.2	58.7	109.9	81.7
East North Central	81.3	117.7	66.2	71.2	104.1	100.0
West North Central	88.5	124.3	70.0	81.5	.	.
South Atlantic	80.9	109.1	63.2	71.6	112.4	95.7
East South Central	101.2	151.3	70.5	88.4	.	.
West South Central	80.6	113.0	58.1	71.7	95.8	86.4
Mountain	76.8	111.3	68.1	66.6	.	.
Pacific	77.7	106.6	65.6	72.8	99.1	86.9
Type of Practice						
Solo	84.5	113.6	72.2	66.1	112.2	90.2
Non-solo	75.6	111.1	60.2	73.9	98.0	92.5
Location						
Nonmetropolitan	102.6	127.5	94.5	69.4	110.2	113.2
Metropolitan—						
Less than 1,000,000	82.8	115.0	65.9	78.0	107.5	95.6
1,000,000 and over	71.1	97.7	61.4	62.0	97.1	86.1
Employment Status						
Self-employed	87.5	119.7	70.8	72.3	127.5	95.0
Employee	54.5	88.0	46.5	58.6	59.4	69.1
Physician Age						
Less than 36 years	72.1	111.0	54.4	75.9	92.2	78.3
36-45 years	76.6	116.5	64.9	70.1	96.2	92.6
46-55 years	81.4	115.1	68.3	76.6	110.3	97.3
56-65 years	86.5	115.2	68.1	66.6	112.7	88.3
66 or more years	75.8	96.8	63.3	50.7	.	80.9

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 17 (continued). **Standard Error of the Mean Number of Office Visits per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	1.09	2.46	1.70	1.81	3.96	2.43
Census Division						
New England	3.43	8.01	5.91	5.93	.	.
Middle Atlantic	2.50	6.54	3.67	3.68	12.15	5.89
East North Central	2.72	5.58	4.17	5.23	9.16	6.89
West North Central	3.95	5.46	5.86	8.45	.	.
South Atlantic	2.72	5.60	4.24	3.85	9.05	4.94
East South Central	6.17	14.14	7.78	7.20	.	.
West South Central	3.05	5.95	6.11	4.90	10.55	8.11
Mountain	4.74	14.48	8.70	6.40	.	.
Pacific	2.78	5.79	4.39	5.67	9.70	6.04
Type of Practice						
Solo	1.72	4.27	2.66	2.37	5.65	3.44
Non-solo	1.41	2.84	2.18	2.67	5.08	3.42
Location						
Nonmetropolitan	3.58	4.82	8.98	5.35	14.66	12.43
Metropolitan—						
Less than 1,000,000	1.77	4.12	2.57	2.85	6.61	3.29
1,000,000 and over	1.44	3.59	2.28	2.46	5.22	3.50
Employment Status						
Self-employed	1.23	2.88	1.86	1.83	4.61	2.52
Employee	2.11	4.23	3.58	5.90	5.33	6.97
Physician Age						
Less than 36 years	2.97	5.13	4.06	7.72	10.59	8.32
36-45 years	1.75	3.86	3.01	2.91	6.08	4.12
46-55 years	2.22	5.90	3.52	3.55	8.68	4.68
56-65 years	2.73	5.28	3.88	3.83	8.70	5.34
66 or more years	3.74	8.97	4.55	4.70	.	6.65

Table 18. **Mean Number of Office Visits per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	80.2	77.4	73.0	73.5	75.7	77.0	79.2
Specialty							
General/Family Practice	116.2	106.3	99.5	101.8	106.3	106.4	112.3
Internal Medicine	63.4	60.9	57.5	57.2	60.0	64.1	64.9
Surgery	66.0	68.2	68.1	68.0	69.8	73.0	70.2
Pediatrics	99.7	105.1	96.0	96.9	100.7	91.8	102.2
Obstetrics/Gynecology	92.5	85.3	84.3	84.5	85.2	88.2	91.4
Census Division							
New England	77.2	70.5	62.5	59.1	70.3	72.4	69.2
Middle Atlantic	72.6	70.2	64.1	66.5	67.6	67.5	70.4
East North Central	78.4	77.2	74.0	76.6	75.5	78.1	81.3
West North Central	85.5	89.8	80.6	78.9	80.0	82.5	88.5
South Atlantic	80.6	79.5	77.2	78.4	74.8	78.7	80.9
East South Central	87.9	90.1	94.8	93.7	92.5	95.1	101.2
West South Central	91.4	87.0	80.8	78.8	81.6	84.3	80.6
Mountain	84.4	75.2	73.6	67.3	75.7	77.0	76.8
Pacific	77.7	70.1	65.0	67.5	75.6	72.2	77.7
Type of Practice							
Solo	81.2	79.3	76.6	78.7	79.2	82.7	84.5
Non-solo	79.2	75.8	69.6	69.0	72.9	72.9	75.6
Location							
Nonmetropolitan	106.0	97.3	96.9	92.9	92.5	97.2	102.6
Metropolitan—							
Less than 1,000,000	82.8	82.1	77.0	76.6	78.5	80.6	82.8
1,000,000 and over	72.1	67.8	64.1	66.5	69.1	69.1	71.1
Physician Age							
Less than 36 years	64.3	68.2	63.0	59.7	69.8	70.0	72.1
36-45 years	76.9	73.1	66.7	69.9	72.7	75.0	76.6
46-55 years	87.7	85.0	83.1	79.4	81.3	81.1	81.4
56-65 years	90.5	87.1	83.7	83.5	80.5	83.6	86.5
66 or more years	79.8	66.7	63.9	69.8	71.1	69.5	75.8

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 18 (continued). **Standard Error of the Mean Number of Office Visits per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	1.12	1.10	1.04	1.05	1.07	1.02	1.09
Specialty							
General/Family Practice	2.52	2.31	2.26	2.17	2.37	2.38	2.46
Internal Medicine	2.14	1.98	1.96	2.11	1.96	1.69	1.70
Surgery	1.49	1.89	1.75	1.76	1.93	1.75	1.81
Pediatrics	3.67	3.95	3.55	3.53	3.53	3.53	3.96
Obstetrics/Gynecology	2.89	2.68	2.67	2.32	2.58	2.53	2.43
Census Division							
New England	4.51	3.56	4.03	3.98	4.48	3.92	3.43
Middle Atlantic	2.92	3.14	2.58	2.69	2.33	2.29	2.50
East North Central	2.53	2.54	2.65	2.77	2.70	2.62	2.72
West North Central	4.24	5.19	3.75	3.65	3.61	3.41	3.95
South Atlantic	2.65	2.59	2.46	2.38	2.70	2.57	2.72
East South Central	4.76	4.95	4.89	5.29	5.03	5.32	6.1
West South Central	4.15	3.70	3.44	3.44	3.26	3.41	3.05
Mountain	4.93	4.40	4.60	4.12	4.48	4.37	4.74
Pacific	2.58	2.23	2.25	2.32	2.73	2.30	2.78
Type of Practice							
Solo	1.51	1.59	1.42	1.53	1.46	1.47	1.72
Non-solo	1.67	1.53	1.51	1.44	1.52	1.41	1.41
Location							
Nonmetropolitan	3.83	3.11	2.98	3.02	3.00	3.10	3.58
Metropolitan—							
Less than 1,000,000	1.69	1.72	1.64	1.65	1.66	1.62	1.77
1,000,000 and over	1.56	1.57	1.45	1.50	1.54	1.41	1.44
Physician Age							
Less than 36 years	2.73	2.98	2.71	2.49	3.02	2.97	2.97
36-45 years	2.00	1.89	1.82	1.78	1.65	1.74	1.75
46-55 years	2.37	2.61	2.28	2.33	2.33	2.21	2.22
56-65 years	2.54	2.34	2.25	2.50	2.69	2.20	2.73
66 or more years	3.14	2.43	2.66	2.84	3.26	2.90	3.74

Table 19. **Mean Number of Visits on Hospital Rounds per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	24.8	17.0	35.5	26.5	21.2	22.9
Census Division						
New England	19.4	17.8	25.0	24.3	.	.
Middle Atlantic	27.3	20.1	39.0	32.2	15.9	21.2
East North Central	24.3	18.0	33.8	26.0	25.5	25.2
West North Central	32.4	20.6	44.8	22.5	.	.
South Atlantic	26.3	13.3	38.5	26.7	18.5	29.9
East South Central	32.3	28.4	54.8	18.7	.	.
West South Central	26.1	17.9	39.6	30.7	17.9	25.6
Mountain	22.7	14.6	35.1	28.1	.	.
Pacific	16.9	9.6	24.3	21.3	20.7	14.6
Type of Practice						
Solo	21.7	17.0	30.1	22.8	14.9	20.7
Non-solo	26.9	17.0	39.0	29.8	23.8	25.1
Location						
Nonmetropolitan	26.9	21.6	52.6	28.4	17.9	37.3
Metropolitan—						
Less than 1,000,000	25.1	16.4	37.1	27.8	26.9	25.9
1,000,000 and over	24.1	14.5	32.7	24.8	17.6	19.1
Employment Status						
Self-employed	25.1	18.9	36.1	26.2	16.8	22.3
Employee	24.0	11.0	33.9	28.1	28.8	26.4
Physician Age						
Less than 36 years	24.7	14.7	36.4	25.8	30.5	23.3
36-45 years	27.8	19.1	40.3	30.1	17.8	30.3
46-55 years	26.1	16.6	35.6	26.1	25.0	19.8
56-65 years	21.7	18.5	26.7	25.6	18.7	17.8
66 or more years	15.2	12.4	22.9	16.1	.	18.4

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 19 (continued). **Standard Error of the Mean Number of Visits on Hospital Rounds per Week , 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.66	0.82	1.46	1.16	2.06	1.69
Census Division						
New England	1.74	3.37	3.55	4.02	.	.
Middle Atlantic	1.63	3.98	3.39	3.65	4.63	2.23
East North Central	1.31	1.73	2.99	2.27	4.86	5.85
West North Central	4.14	1.82	6.42	3.03	.	.
South Atlantic	1.60	1.69	3.12	2.81	2.95	5.18
East South Central	3.54	3.85	9.37	2.96	.	.
West South Central	2.08	1.98	7.05	4.56	2.54	5.41
Mountain	2.18	2.69	7.06	4.66	.	.
Pacific	1.31	1.32	3.64	2.45	5.15	1.60
Type of Practice						
Solo	0.82	1.31	1.93	1.55	2.11	2.54
Non-solo	0.95	1.05	2.02	1.68	2.77	2.24
Location						
Nonmetropolitan	1.79	1.62	8.92	3.20	2.55	9.49
Metropolitan—						
Less than 1,000,000	0.93	1.32	2.25	1.74	4.13	2.79
1,000,000 and over	1.05	1.34	1.90	1.73	2.31	1.93
Employment Status						
Self-employed	0.65	0.96	1.61	1.27	1.55	1.74
Employee	1.72	1.54	3.31	2.81	5.03	5.66
Physician Age						
Less than 36 years	1.75	1.45	3.84	2.73	11.79	3.45
36-45 years	1.16	1.28	2.57	2.40	2.02	4.09
46-55 years	1.59	1.94	3.26	2.07	3.98	2.19
56-65 years	1.12	2.03	2.63	2.29	4.57	1.59
66 or more years	1.33	2.77	3.17	2.11	.	3.29

Table 20. **Mean Number of Visits on Hospital Rounds per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	32.3	32.9	28.4	27.2	25.8	25.1	24.8
Specialty							
General/Family Practice	28.8	28.3	24.4	22.0	18.0	16.9	17.0
Internal Medicine	41.1	42.8	37.6	35.3	37.7	37.0	35.5
Surgery	40.8	39.2	33.9	31.9	27.7	28.1	26.5
Pediatrics	24.6	25.3	18.6	21.0	21.1	21.6	21.2
Obstetrics/Gynecology	27.4	27.3	23.9	23.7	23.7	19.9	22.9
Census Division							
New England	27.3	30.3	26.1	22.5	20.9	20.1	19.4
Middle Atlantic	31.7	34.4	30.8	29.5	27.2	27.2	27.3
East North Central	37.7	36.5	30.3	27.5	29.5	27.9	24.3
West North Central	37.9	39.6	35.2	27.5	26.3	28.8	32.4
South Atlantic	35.4	31.8	28.5	27.5	27.6	26.1	26.3
East South Central	44.3	47.8	37.5	44.3	33.7	34.5	32.3
West South Central	34.2	39.1	32.9	33.9	28.0	26.0	26.1
Mountain	27.5	26.4	22.6	22.4	21.7	20.5	22.7
Pacific	19.9	21.0	18.3	17.6	17.1	16.3	16.9
Type of Practice							
Solo	29.1	28.7	25.9	23.9	22.6	21.9	21.7
Non-solo	35.7	36.5	30.7	30.0	28.3	27.5	26.9
Location							
Nonmetropolitan	43.1	42.9	36.6	32.4	26.4	26.0	26.9
Metropolitan—							
Less than 1,000,000	35.1	34.9	30.2	29.4	29.1	27.5	25.1
1,000,000 and over	27.1	28.4	24.9	24.1	22.7	22.6	24.1
Physician Age							
Less than 36 years	33.8	30.9	28.3	25.7	27.6	24.0	24.7
36-45 years	33.7	36.2	30.9	29.3	28.7	28.5	27.8
46-55 years	34.4	35.1	31.1	30.5	27.0	26.1	26.1
56-65 years	31.4	30.7	25.4	24.9	21.2	21.0	21.7
66 or more years	19.6	19.5	17.1	15.6	16.3	16.2	15.2

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 20 (continued). **Standard Error of the Mean Number of Visits on Hospital Rounds per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.76	0.72	0.61	0.67	0.65	0.61	0.66
Specialty							
General/Family Practice	1.31	1.26	1.20	1.14	0.94	0.84	0.82
Internal Medicine	1.88	1.75	1.64	1.90	1.70	1.56	1.46
Surgery	1.58	1.49	1.23	1.39	1.27	1.24	1.16
Pediatrics	2.18	2.19	1.22	1.91	2.34	1.91	2.06
Obstetrics/Gynecology	1.51	1.91	1.18	1.25	1.26	1.08	1.69
Census Division							
New England	2.77	2.66	2.37	2.14	2.05	1.84	1.74
Middle Atlantic	1.93	2.20	1.74	2.02	1.70	1.75	1.63
East North Central	2.01	1.74	1.62	1.54	1.94	1.74	1.31
West North Central	2.72	2.45	2.45	2.04	2.42	2.47	4.14
South Atlantic	1.98	1.59	1.46	1.50	1.81	1.51	1.60
East South Central	3.60	4.26	2.99	3.95	2.63	2.93	3.54
West South Central	2.46	2.55	1.91	2.50	1.88	1.73	2.08
Mountain	2.64	2.50	1.98	2.34	2.06	1.79	2.18
Pacific	1.39	1.10	1.03	1.04	1.07	0.97	1.31
Type of Practice							
Solo	1.01	0.91	0.82	0.81	0.77	0.74	0.82
Non-solo	1.15	1.10	0.90	1.03	1.00	0.92	0.95
Location							
Nonmetropolitan	2.23	2.29	1.92	2.13	1.48	1.57	1.79
Metropolitan—							
Less than 1,000,000	1.24	1.17	0.96	1.12	1.15	0.99	0.93
1,000,000 and over	1.04	0.96	0.86	0.89	0.86	0.88	1.05
Physician Age							
Less than 36 years	2.11	1.88	1.68	1.71	2.37	1.64	1.75
36-45 years	1.37	1.37	1.16	1.17	1.10	1.17	1.16
46-55 years	1.67	1.63	1.40	1.61	1.45	1.28	1.59
56-65 years	1.75	1.39	1.14	1.42	1.09	0.97	1.12
66 or more years	1.33	1.56	1.28	1.24	1.30	1.77	1.33

Table 21. **Mean Number of Surgical Procedures per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	3.5	1.2	1.1	8.4	0.7	8.5
Census Division						
New England	3.1	1.5	0.2	8.9	.	.
Middle Atlantic	2.8	0.2	1.1	7.4	0.2	7.9
East North Central	4.0	1.3	1.4	9.8	0.4	9.7
West North Central	3.7	2.1	0.3	9.2	.	.
South Atlantic	3.5	0.3	1.8	8.0	0.6	8.6
East South Central	3.6	2.1	0.1	8.5	.	.
West South Central	3.9	1.6	1.0	8.1	0.9	7.5
Mountain	4.6	2.1	2.4	8.7	.	.
Pacific	3.3	1.4	0.7	8.0	1.5	8.1
Type of Practice						
Solo	3.7	1.5	0.8	7.7	0.6	7.9
Non-solo	3.4	1.0	1.3	9.0	0.7	9.0
Location						
Nonmetropolitan	3.6	1.8	0.9	10.6	0.8	9.6
Metropolitan—						
Less than 1,000,000	4.1	1.0	1.6	9.2	0.9	9.6
1,000,000 and over	3.0	1.0	0.8	7.3	0.5	7.4
Employment Status						
Self-employed	4.0	1.5	1.1	8.6	0.8	8.7
Employee	2.0	0.4	1.1	7.4	0.5	7.1
Physician Age						
Less than 36 years	2.4	1.0	1.8	7.1	1.0	8.3
36-45 years	3.5	1.3	1.4	8.9	0.5	8.9
46-55 years	4.3	1.1	1.0	9.0	0.9	8.8
56-65 years	3.6	1.1	0.4	8.3	0.5	8.0
66 or more years	2.4	1.6	0.1	5.0	.	6.7

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 21 (continued). **Standard Error of the Mean Number of Surgical Procedures per Week, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.10	0.11	0.16	0.20	0.12	0.28
Census Division						
New England	0.44	0.62	0.16	1.14	.	.
Middle Atlantic	0.22	0.16	0.30	0.46	0.07	0.66
East North Central	0.27	0.23	0.51	0.53	0.21	0.80
West North Central	0.38	0.27	0.17	0.90	.	.
South Atlantic	0.23	0.10	0.47	0.43	0.26	0.65
East South Central	0.48	0.89	0.08	0.82	.	.
West South Central	0.28	0.27	0.47	0.52	0.29	0.74
Mountain	0.46	0.56	1.27	0.75	.	.
Pacific	0.24	0.35	0.23	0.49	0.56	0.52
Type of Practice						
Solo	0.16	0.23	0.23	0.28	0.12	0.39
Non-solo	0.13	0.10	0.21	0.28	0.16	0.39
Location						
Nonmetropolitan	0.30	0.20	0.56	0.77	0.26	1.32
Metropolitan—						
Less than 1,000,000	0.17	0.15	0.32	0.32	0.23	0.43
1,000,000 and over	0.13	0.25	0.16	0.26	0.13	0.36
Employment Status						
Self-employed	0.12	0.15	0.18	0.23	0.16	0.30
Employee	0.15	0.11	0.32	0.41	0.15	0.72
Physician Age						
Less than 36 years	0.23	0.15	0.58	0.44	0.37	1.28
36-45 years	0.17	0.18	0.28	0.35	0.10	0.50
46-55 years	0.22	0.24	0.31	0.36	0.32	0.47
56-65 years	0.22	0.21	0.20	0.45	0.26	0.55
66 or more years	0.30	0.53	0.09	0.74	.	0.88

Table 22. **Mean Number of Surgical Procedures per Week, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	3.1	3.3	3.2	3.0	3.5	3.5	3.5
Specialty							
General/Family Practice	1.4	1.4	1.1	1.1	1.2	1.1	1.2
Internal Medicine	0.5	0.7	0.8	0.7	1.1	1.5	1.1
Surgery	7.0	7.5	7.6	7.1	8.3	8.2	8.4
Pediatrics	0.5	0.7	0.7	0.6	0.7	0.9	0.7
Obstetrics/Gynecology	8.2	8.0	7.6	7.2	8.5	8.2	8.5
Census Division							
New England	2.8	2.9	3.0	2.4	2.7	2.9	3.1
Middle Atlantic	2.8	3.2	2.9	2.7	3.0	2.7	2.8
East North Central	3.4	3.9	3.6	2.7	3.8	4.2	4.0
West North Central	3.9	3.4	4.3	3.4	3.9	4.1	3.7
South Atlantic	3.1	3.1	3.3	3.1	3.6	3.6	3.5
East South Central	3.5	3.7	3.5	3.8	4.3	3.3	3.6
West South Central	3.2	3.7	3.5	3.5	3.6	3.8	3.9
Mountain	3.3	3.5	3.0	3.7	3.9	3.9	4.6
Pacific	2.8	2.8	2.5	2.7	3.1	3.4	3.3
Type of Practice							
Solo	2.7	3.2	3.0	2.9	3.2	3.5	3.7
Non-solo	3.6	3.4	3.4	3.1	3.7	3.5	3.4
Location							
Nonmetropolitan	3.3	3.3	3.4	3.2	3.4	3.7	3.6
Metropolitan—							
Less than 1,000,000	3.4	3.8	3.7	3.3	4.1	3.8	4.1
1,000,000 and over	2.8	2.8	2.7	2.7	3.0	3.2	3.0
Physician Age							
Less than 36 years	2.4	2.3	2.3	2.0	3.1	2.8	2.4
36-45 years	3.5	3.5	3.5	3.3	3.5	3.6	3.5
46-55 years	3.6	3.9	3.7	3.7	4.3	4.5	4.3
56-65 years	3.0	3.4	3.3	2.8	3.0	3.1	3.6
66 or more years	1.7	1.7	2.0	1.5	2.5	2.3	2.4

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in specialty breakdown, include physicians in all specialties except psychiatry, radiology, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 22 (continued). **Standard Error of the Mean Number of Surgical Procedures per Week, 1982-1988**[a]

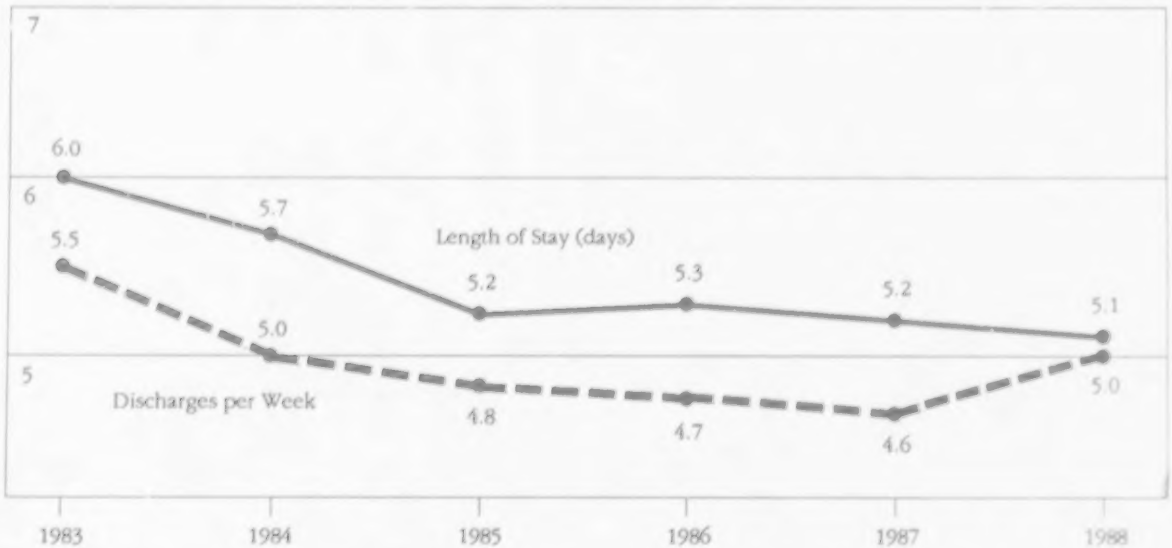
	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.10	0.10	0.10	0.09	0.11	0.11	0.10
Specialty							
General/Family Practice	0.17	0.11	0.08	0.14	0.09	0.09	0.11
Internal Medicine	0.11	0.17	0.13	0.11	0.20	0.21	0.16
Surgery	0.21	0.19	0.19	0.18	0.25	0.21	0.20
Pediatrics	0.09	0.12	0.09	0.10	0.10	0.16	0.12
Obstetrics/Gynecology	0.35	0.31	0.27	0.27	0.35	0.31	0.28
Census Division							
New England	0.39	0.39	0.43	0.35	0.43	0.40	0.44
Middle Atlantic	0.26	0.27	0.31	0.20	0.27	0.23	0.22
East North Central	0.28	0.29	0.23	0.20	0.30	0.33	0.27
West North Central	0.36	0.36	0.42	0.35	0.41	0.45	0.38
South Atlantic	0.24	0.23	0.24	0.20	0.33	0.26	0.23
East South Central	0.44	0.39	0.38	0.50	0.51	0.44	0.48
West South Central	0.30	0.26	0.28	0.40	0.28	0.29	0.28
Mountain	0.41	0.60	0.34	0.37	0.41	0.38	0.46
Pacific	0.28	0.18	0.18	0.23	0.20	0.23	0.24
Type of Practice							
Solo	0.12	0.14	0.12	0.13	0.13	0.14	0.16
Non-solo	0.18	0.14	0.16	0.13	0.17	0.15	0.13
Location							
Nonmetropolitan	0.23	0.23	0.26	0.27	0.29	0.29	0.30
Metropolitan—							
Less than 1,000,000	0.18	0.17	0.16	0.16	0.19	0.18	0.17
1,000,000 and over	0.14	0.14	0.14	0.12	0.14	0.14	0.13
Physician Age							
Less than 36 years	0.32	0.23	0.21	0.20	0.35	0.29	0.23
36-45 years	0.21	0.19	0.21	0.17	0.17	0.18	0.17
46-55 years	0.22	0.23	0.20	0.23	0.27	0.24	0.22
56-65 years	0.19	0.20	0.19	0.18	0.22	0.22	0.22
66 or more years	0.17	0.18	0.21	0.16	0.30	0.28	0.30

Hospital Utilization by Physicians

Physicians have a significant influence on the utilization of hospital resources. Two measures indicating the extent of hospital utilization of physicians' patients are the number of patients discharged from the hospital and the average length of their hospital stays.

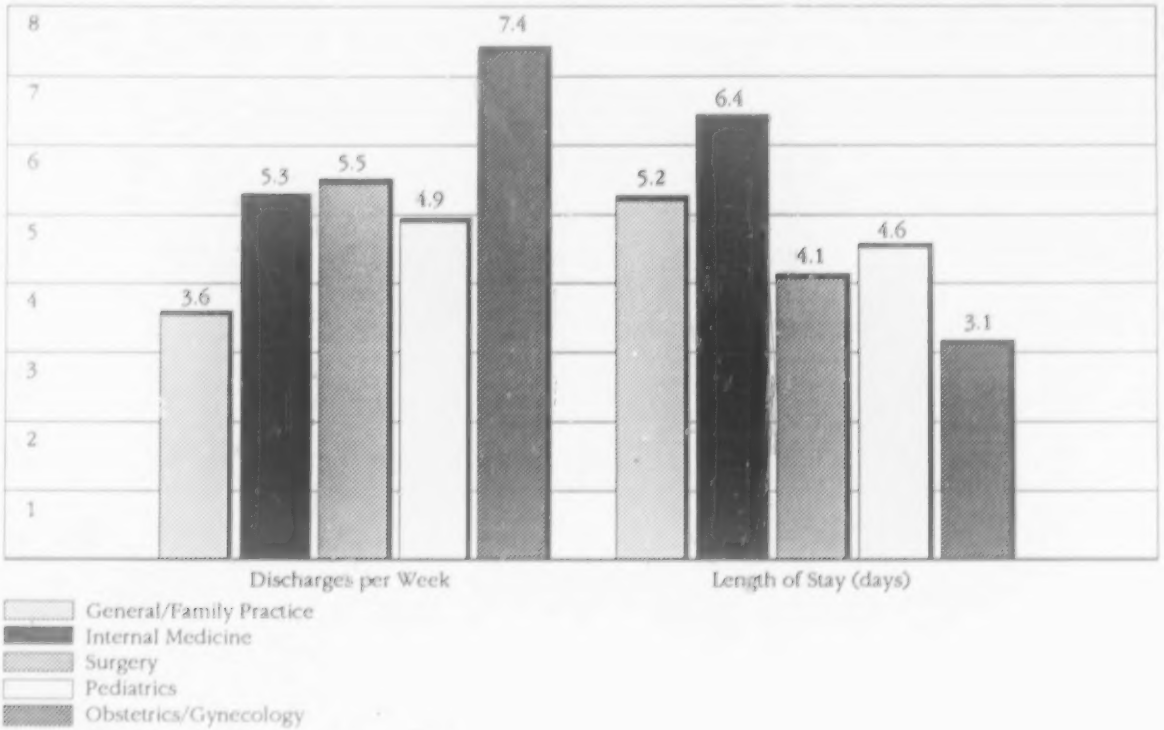
Declining hospital utilization is reflected in the trend for both the average number of discharges per physician per week and the length of stay of patients (see Figure 7). However, it appears that hospital utilization may be leveling off. Weekly discharges increased to 5.0 in 1988 after having declined from 5.5 to 4.6 during the period 1983 to 1987. Average length of stay declined from 6.0 to 5.2 between 1983 and 1985. However, changes were more moderate from 1985 to 1988. Figure 8 shows average discharge rates and lengths of stay of physicians by specialty. General/family practitioners have the fewest hospitalized patients, but their patients have the second longest average lengths of stay. At the other extreme, obstetricians/gynecologists have the most hospitalized patients and their patients have the shortest stays. Figure 9 indicates that geographic differences in average hospital lengths of stay are substantial.

Figure 7. **Average Hospital Discharges per Week and Length of Stay (in days) of Discharged Patients for All Physicians, 1983-1988[a]**



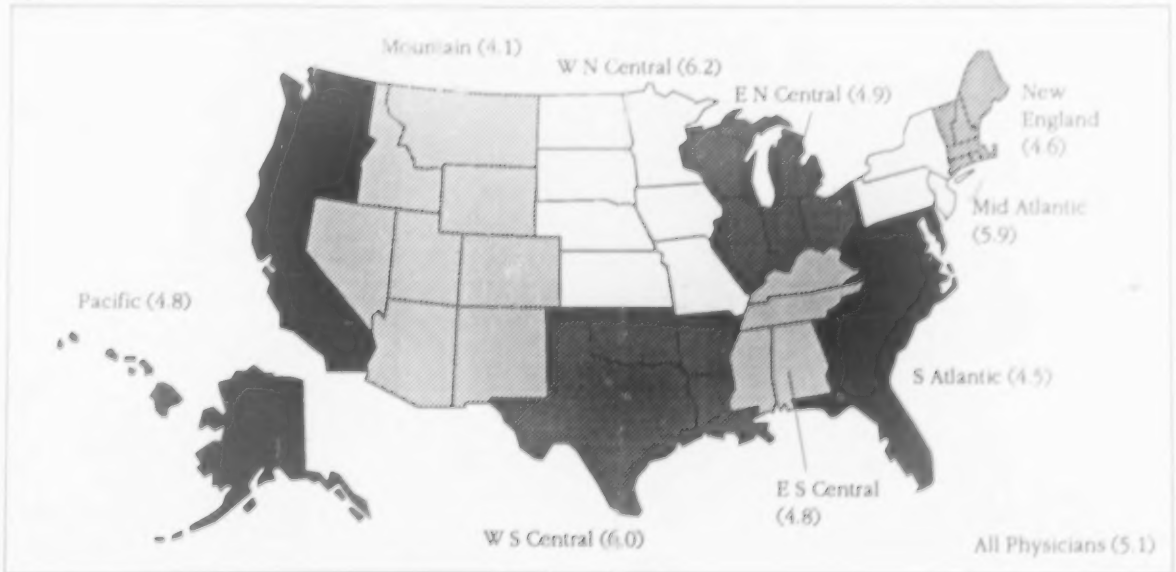
Source: AMA Socioeconomic Monitoring System 1983-1988 core surveys.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 8. **Average Hospital Discharges per Week and Length of Stay (in days) of Discharged Patients, by Specialty, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 9. **Average Length of Hospital Stay (in days) per Discharged Patient, by Census Division, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Table 23. **Mean Number of Patients Discharged from the Hospital per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	5.0	3.6	5.3	5.5	4.9	7.4
Census Division						
New England	3.9	2.8	4.1	4.7	.	.
Middle Atlantic	4.4	2.9	4.7	5.0	3.9	6.3
East North Central	4.9	4.4	5.0	5.6	5.4	7.6
West North Central	5.3	4.9	6.2	5.6	.	.
South Atlantic	5.4	2.2	5.6	6.0	5.2	8.4
East South Central	6.8	5.7	10.2	7.3	.	.
West South Central	5.6	4.4	6.7	5.5	5.2	7.6
Mountain	4.6	3.7	5.7	5.4	.	.
Pacific	4.4	2.6	4.5	5.0	4.9	8.1
Type of Practice						
Solo	4.5	3.6	4.6	4.9	4.7	7.0
Non-solo	5.3	3.6	5.8	6.1	5.0	7.7
Location						
Nonmetropolitan	5.6	4.7	7.6	7.2	5.8	9.2
Metropolitan—						
Less than 1,000,000	5.2	3.3	6.0	5.9	5.4	7.9
1,000,000 and over	4.6	3.2	4.6	4.8	4.4	6.8
Employment Status						
Self-employed	5.3	4.0	5.7	5.8	5.8	7.5
Employee	3.9	2.3	4.1	4.3	3.3	6.6
Physician Age						
Less than 36 years	4.6	3.2	4.7	4.2	3.6	10.0
36-45 years	5.4	4.4	5.6	5.8	4.9	7.7
46-55 years	5.4	3.3	6.5	6.1	5.6	7.4
56-65 years	4.5	3.8	4.1	5.5	4.7	6.9
66 or more years	2.9	2.2	3.3	2.8	.	5.2

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 23 (continued). **Standard Error of the Mean Number of Patients Discharged from the Hospital per Week, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.14	0.16	0.25	0.23	0.30	0.31
Census Division						
New England	0.46	0.65	0.51	0.60	.	.
Middle Atlantic	0.33	0.39	0.54	0.38	0.60	0.62
East North Central	0.24	0.37	0.47	0.49	0.72	0.65
West North Central	0.33	0.41	0.85	0.70	.	.
South Atlantic	0.47	0.28	0.53	0.70	0.79	0.88
East South Central	0.72	0.86	2.36	1.67	.	.
West South Central	0.41	0.59	1.48	0.48	0.84	0.90
Mountain	0.44	0.87	1.50	0.87	.	.
Pacific	0.33	0.35	0.52	0.53	0.93	0.77
Type of Practice						
Solo	0.15	0.27	0.32	0.28	0.36	0.44
Non-solo	0.21	0.20	0.36	0.35	0.40	0.43
Location						
Nonmetropolitan	0.30	0.35	1.01	0.79	0.76	1.10
Metropolitan—						
Less than 1,000,000	0.24	0.26	0.45	0.34	0.48	0.47
1,000,000 and over	0.19	0.24	0.30	0.33	0.42	0.43
Employment Status						
Self-employed	0.14	0.20	0.29	0.26	0.39	0.32
Employee	0.38	0.24	0.53	0.34	0.42	0.95
Physician Age						
Less than 36 years	0.41	0.32	0.49	0.38	0.51	2.04
36-45 years	0.29	0.26	0.43	0.41	0.55	0.43
46-55 years	0.26	0.46	0.66	0.49	0.59	0.55
56-65 years	0.21	0.42	0.45	0.39	0.64	0.61
66 or more years	0.23	0.36	0.44	0.43	.	0.94

Table 24. **Mean Number of Patients Discharged from the Hospital per Week, 1983-1988**[a]

	1983	1984	1985	1986	1987	1988
All Physicians	5.5	5.0	4.8	4.7	4.6	5.0
Specialty						
General/Family Practice	4.5	4.0	3.9	3.3	3.3	3.6
Internal Medicine	5.2	4.6	4.7	4.8	4.8	5.3
Surgery	6.1	6.1	5.4	5.3	5.5	5.5
Pediatrics	5.8	5.7	5.1	6.1	5.8	4.9
Obstetrics/Gynecology	7.7	6.7	6.8	7.4	7.0	7.4
Census Division						
New England	6.0	4.0	3.7	4.2	3.5	3.9
Middle Atlantic	5.1	4.2	4.5	4.6	4.2	4.4
East North Central	6.1	6.3	5.2	5.0	4.5	4.9
West North Central	5.9	5.7	5.8	4.7	5.4	5.3
South Atlantic	5.4	5.1	4.9	5.0	4.9	5.4
East South Central	7.1	6.5	7.0	7.0	6.4	6.8
West South Central	6.7	5.8	5.9	5.6	5.0	5.6
Mountain	4.7	5.0	3.6	4.0	4.5	4.6
Pacific	4.0	3.4	3.4	3.4	3.9	4.4
Type of Practice						
Solo	4.8	4.4	4.2	4.3	4.2	4.5
Non-solo	6.1	5.5	5.2	5.1	4.9	5.3
Location						
Nonmetropolitan	7.1	6.8	6.1	5.5	6.0	5.6
Metropolitan—						
Less than 1,000,000	6.0	5.3	4.9	5.5	5.0	5.2
1,000,000 and over	4.6	4.3	4.3	3.9	3.9	4.6
Physician Age						
Less than 36 years	5.4	4.8	5.5	4.4	3.8	4.6
36-45 years	5.7	5.5	4.9	5.0	5.0	5.4
46-55 years	5.7	5.3	5.0	5.2	5.3	5.4
56-65 years	5.8	4.5	4.4	4.1	4.2	4.5
66 or more years	3.2	3.0	2.9	4.2	2.8	2.9

Source: 1983-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in specialty breakdown, include physicians in all specialties except psychiatry, radiology, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 24 (continued). **Standard Error of the Mean Number of Patients Discharged from the Hospital per Week, 1983-1988**[a]

	1983	1984	1985	1986	1987	1988
All Physicians	0.15	0.14	0.15	0.14	0.13	0.14
Specialty						
General/Family Practice	0.20	0.18	0.21	0.17	0.21	0.16
Internal Medicine	0.27	0.20	0.34	0.21	0.30	0.25
Surgery	0.20	0.19	0.19	0.22	0.20	0.23
Pediatrics	0.46	0.43	0.32	0.57	0.58	0.30
Obstetrics/Gynecology	0.41	0.33	0.33	0.46	0.35	0.31
Census Division						
New England	1.09	0.38	0.40	0.70	0.34	0.46
Middle Atlantic	0.45	0.26	0.35	0.48	0.36	0.33
East North Central	0.35	0.62	0.55	0.24	0.24	0.24
West North Central	0.36	0.33	0.59	0.45	0.40	0.33
South Atlantic	0.31	0.31	0.31	0.37	0.38	0.47
East South Central	0.57	0.53	0.54	0.67	0.62	0.72
West South Central	0.54	0.32	0.55	0.44	0.38	0.41
Mountain	0.58	0.68	0.39	0.37	0.41	0.44
Pacific	0.24	0.17	0.18	0.21	0.32	0.33
Type of Practice						
Solo	0.16	0.13	0.14	0.15	0.14	0.15
Non-solo	0.25	0.25	0.25	0.22	0.20	0.21
Location						
Nonmetropolitan	0.35	0.36	0.37	0.34	0.42	0.30
Metropolitan—						
Less than 1,000,000	0.25	0.17	0.20	0.24	0.21	0.24
1,000,000 and over	0.21	0.25	0.24	0.19	0.18	0.19
Physician Age						
Less than 36 years	0.47	0.47	0.58	0.29	0.31	0.41
36-45 years	0.28	0.33	0.29	0.25	0.27	0.29
46-55 years	0.24	0.22	0.21	0.25	0.26	0.26
56-65 years	0.38	0.19	0.25	0.27	0.22	0.21
66 or more years	0.23	0.22	0.22	0.67	0.20	0.23

Table 25. **Mean Number of Days for Hospital Stays per Patient, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	5.1	5.2	6.4	4.1	4.6	3.1
Census Division						
New England	4.6	.	5.5	4.0	.	.
Middle Atlantic	5.9	8.4	7.4	4.9	3.4	3.1
East North Central	4.9	4.8	5.4	4.4	4.9	2.9
West North Central	6.2	6.4	6.4	3.6	.	.
South Atlantic	4.5	4.9	5.5	4.0	3.0	3.3
East South Central	4.8	4.9	5.6	3.7	.	.
West South Central	6.0	4.4	10.4	4.0	8.8	3.4
Mountain	4.1	.	.	3.3	.	.
Pacific	4.8	4.3	6.6	3.9	5.0	2.7
Type of Practice						
Solo	4.6	4.9	5.7	4.0	4.8	3.0
Non-solo	5.5	5.5	6.8	4.2	4.5	3.1
Location						
Nonmetropolitan	4.5	5.1	4.8	3.8	3.1	.
Metropolitan—						
Less than 1,000,000	4.8	5.2	5.8	4.0	4.0	3.1
1,000,000 and over	5.6	5.3	7.0	4.3	5.4	3.0
Employment Status						
Self-employed	4.5	4.8	5.6	4.1	4.0	3.1
Employee	7.5	7.5	9.4	4.5	6.2	3.0
Physician Age						
Less than 36 years	5.0	4.2	5.9	3.8	3.1	2.8
36-45 years	5.2	5.2	6.5	4.2	4.2	2.9
46-55 years	5.3	4.9	6.4	4.0	6.8	3.2
56-65 years	4.8	5.5	6.4	4.2	3.1	3.2
66 or more years	5.3	6.2	5.7	4.3	.	3.3

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.
a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.
b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.
. Indicates fewer than 20 observations.

Table 25 (continued). **Standard Error of the Mean Number of Days for Hospital Stays per Patient, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.16	0.34	0.41	0.10	0.65	0.06
Census Division						
New England	0.20	.	0.32	0.38	.	.
Middle Atlantic	0.38	2.41	0.47	0.39	0.20	0.14
East North Central	0.19	0.23	0.34	0.22	0.89	0.14
West North Central	0.75	1.62	1.09	0.35	.	.
South Atlantic	0.12	0.27	0.21	0.18	0.15	0.11
East South Central	0.27	0.24	0.63	0.31	.	.
West South Central	1.01	0.22	4.98	0.27	4.82	0.18
Mountain	0.36	.	.	0.32	.	.
Pacific	0.41	0.30	1.21	0.25	1.49	0.16
Type of Practice						
Solo	0.17	0.16	0.19	0.15	1.71	0.09
Non-solo	0.24	0.59	0.67	0.14	0.47	0.08
Location						
Nonmetropolitan	0.38	0.76	0.22	0.26	0.19	.
Metropolitan—						
Less than 1,000,000	0.15	0.58	0.27	0.12	0.40	0.08
1,000,000 and over	0.30	0.42	0.75	0.18	1.30	0.09
Employment Status						
Self-employed	0.10	0.14	0.14	0.11	0.81	0.06
Employee	0.68	1.60	1.87	0.29	1.03	0.20
Physician Age						
Less than 36 years	0.30	0.18	0.41	0.26	0.16	0.14
36-45 years	0.28	0.44	0.86	0.18	0.69	0.08
46-55 years	0.36	0.27	0.79	0.17	2.15	0.12
56-65 years	0.24	0.87	0.50	0.26	0.12	0.14
66 or more years	0.64	2.09	0.26	0.37	.	0.30

Table 26. **Mean Number of Days for Hospital Stays per Patient, 1983-1988**[a]

	1983	1984	1985	1986	1987	1988
All Physicians	6.0	5.7	5.2	5.3	5.2	5.1
Specialty						
General/Family Practice	7.7	5.2	5.1	5.3	5.4	5.2
Internal Medicine	7.3	7.4	6.5	6.6	6.4	6.4
Surgery	4.7	4.4	4.3	4.0	4.2	4.1
Pediatrics	4.4	5.1	4.5	4.7	5.9	4.6
Obstetrics/Gynecology	3.8	3.8	3.4	3.5	3.3	3.1
Census Division						
New England	7.4	7.1	5.2	5.5	5.1	4.6
Middle Atlantic	6.6	6.6	5.8	6.1	5.5	5.9
East North Central	5.9	5.5	5.7	5.5	6.9	4.9
West North Central	5.7	5.2	5.1	4.8	5.4	6.2
South Atlantic	6.6	6.1	5.2	5.4	4.8	4.5
East South Central	5.3	5.8	5.9	6.5	5.9	4.8
West South Central	4.9	5.9	4.5	4.7	4.3	6.0
Mountain	5.5	4.7	4.1	4.5	4.1	4.1
Pacific	5.8	4.4	4.4	4.4	4.2	4.8
Type of Practice						
Solo	5.3	5.1	4.8	4.8	4.8	4.6
Non-solo	6.7	6.3	5.5	5.6	5.6	5.5
Location						
Nonmetropolitan	5.1	4.6	4.4	4.9	4.6	4.5
Metropolitan—						
Less than 1,000,000	5.8	5.4	5.2	5.4	5.6	4.8
1,000,000 and over	6.5	6.3	5.4	5.3	5.0	5.6
Physician Age						
Less than 36 years	5.7	5.3	5.0	5.1	4.7	5.0
36-45 years	5.5	5.9	5.2	5.2	5.5	5.2
46-55 years	6.1	5.6	5.0	5.2	5.1	5.3
56-65 years	6.7	5.4	5.1	5.2	4.9	4.8
66 or more years	7.1	6.8	5.7	6.5	5.6	5.3

Source: 1983-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in specialty breakdown, include physicians in all specialties except psychiatry, radiology, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 26 (continued). **Standard Error of the Mean Number of Days for Hospital Stays per Patient, 1983-1988**[a]

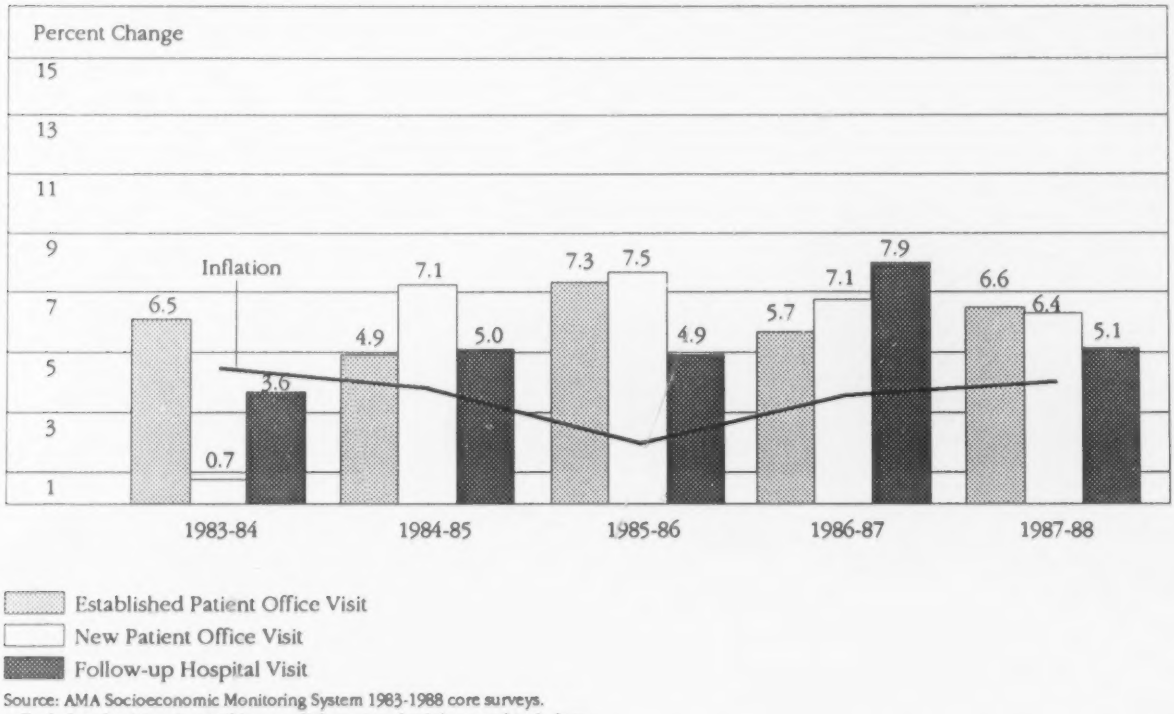
	1983	1984	1985	1986	1987	1988
All Physicians	0.27	0.18	0.10	0.14	0.20	0.16
Specialty						
General/Family Practice	1.19	0.18	0.19	0.21	0.40	0.34
Internal Medicine	0.32	0.48	0.18	0.26	0.26	0.41
Surgery	0.13	0.10	0.14	0.10	0.11	0.10
Pediatrics	0.31	0.65	0.43	0.62	1.48	0.65
Obstetrics/Gynecology	0.09	0.08	0.07	0.14	0.07	0.06
Census Division						
New England	1.62	1.18	0.44	0.57	0.45	0.20
Middle Atlantic	0.33	0.31	0.30	0.45	0.20	0.38
East North Central	0.22	0.22	0.30	0.26	1.08	0.19
West North Central	0.37	0.28	0.37	0.29	0.65	0.75
South Atlantic	0.85	0.55	0.22	0.35	0.14	0.12
East South Central	0.25	0.58	0.53	1.11	0.89	0.27
West South Central	0.17	1.00	0.15	0.22	0.20	1.01
Mountain	0.45	0.64	0.24	0.36	0.34	0.36
Pacific	1.18	0.21	0.24	0.18	0.16	0.41
Type of Practice						
Solo	0.11	0.10	0.11	0.10	0.15	0.17
Non-solo	0.50	0.35	0.17	0.24	0.34	0.24
Location						
Nonmetropolitan	0.14	0.09	0.12	0.34	0.40	0.38
Metropolitan—						
Less than 1,000,000	0.36	0.25	0.17	0.23	0.42	0.15
1,000,000 and over	0.49	0.33	0.16	0.19	0.12	0.30
Physician Age						
Less than 36 years	0.28	0.37	0.21	0.32	0.23	0.30
36-45 years	0.17	0.39	0.20	0.22	0.47	0.28
46-55 years	0.79	0.33	0.19	0.23	0.23	0.36
56-65 years	0.79	0.20	0.22	0.26	0.15	0.24
66 or more years	0.69	0.87	0.30	0.89	0.67	0.64

Fees for Physician Visits

Office visits with new and established patients and follow-up hospital visits are the most commonly billed physician services and account for a large proportion of physician revenue. Fees reported for these services are "current usual fees" and, therefore, may not reflect discounts allowed under some circumstances, such as assigned Medicare services and services to patients covered by preferred provider organization contracts.

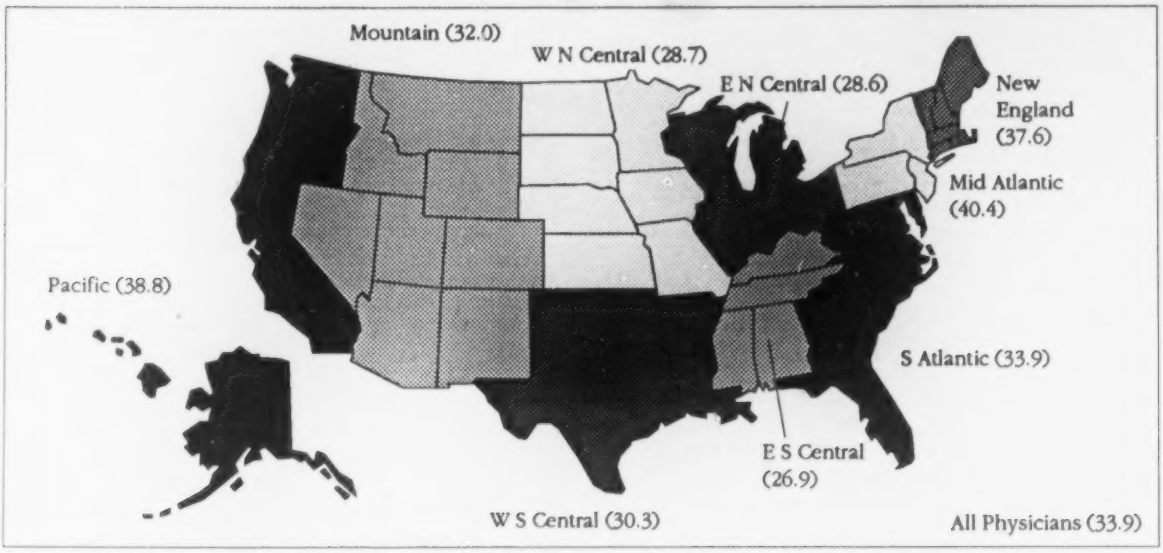
As shown in Figure 10, fees for all three types of visits increased faster than the 4.1% rate of inflation (measured by the All Items Consumer Price Index for Urban Consumers) from 1987 to 1988. Figure 11 indicates that in 1988 the average fee for an established patient office visit reached $33.9 for the entire nation, but ranged from $26.9 in the East South Central states to $40.4 in the Middle Atlantic States. Variations in relative fees by type of visit and specialty, using the national average established patient office visit fee as the base of comparison, are shown in Figure 12.

Figure 10. **Percent Change in Average Fees for Selected Types of Visits for All Physicians, 1983-1988[a]**



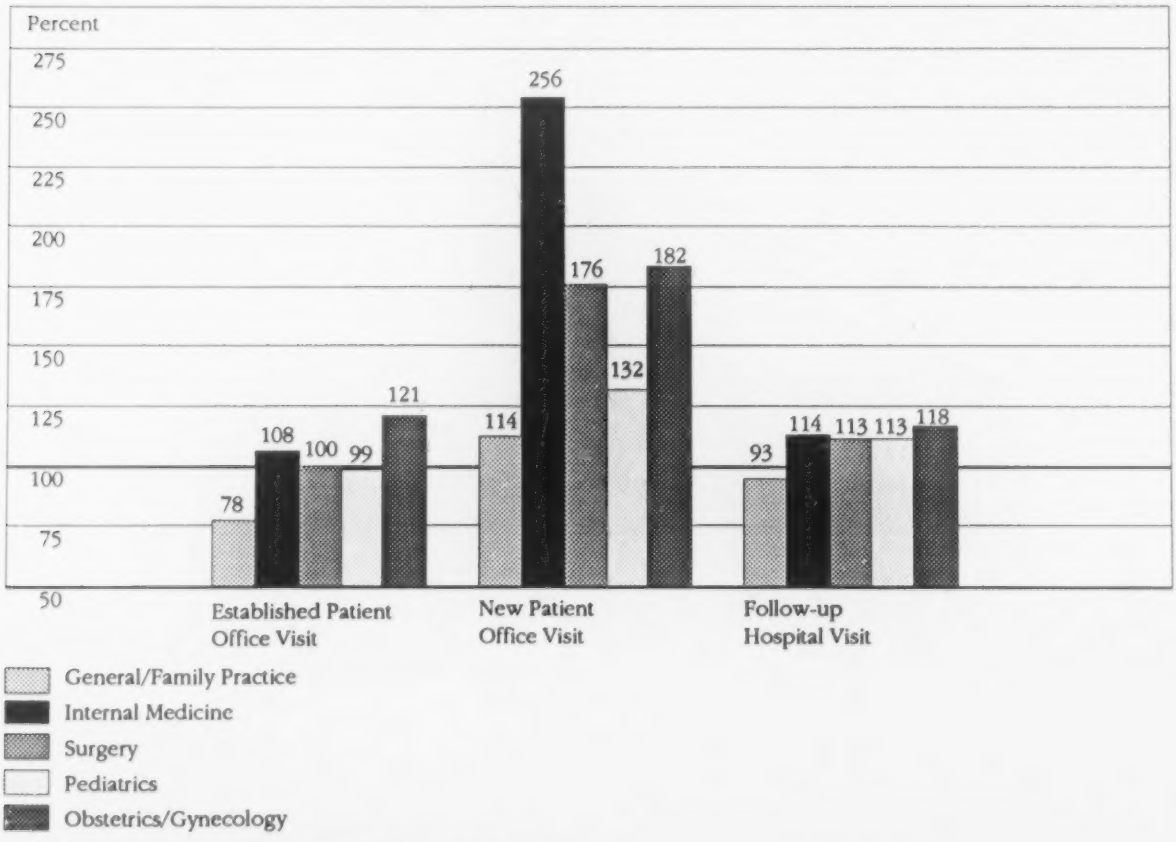
Source: AMA Socioeconomic Monitoring System 1983-1988 core surveys.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 11. **Average Fee (in dollars) for an Established Patient Office Visit, by Census Division, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Figure 12. **Average Fees by Type of Visit and Specialty as a Percent of the Average Fee for an Established Patient Office Visit for All Physicians, 1988[a]**



Source: AMA Socioeconomic Monitoring System 1988 core survey.
a. Excludes physicians in psychiatry, radiology, anesthesiology, and pathology.

Table 27. **Mean Fee (in dollars) for an Office Visit with an Established Patient, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	33.91	26.46	36.50	33.93	30.01	40.95
Census Division						
New England	37.56	28.12	40.24	39.56	.	.
Middle Atlantic	40.44	25.74	42.37	42.48	32.39	46.25
East North Central	28.61	23.59	30.67	28.59	24.83	37.45
West North Central	28.69	23.43	35.56	27.04	.	.
South Atlantic	33.93	27.32	34.98	33.64	31.25	39.92
East South Central	26.94	22.64	28.65	29.64	.	.
West South Central	30.25	24.61	32.63	29.31	31.19	38.98
Mountain	32.01	26.48	32.71	31.32	.	.
Pacific	38.79	35.10	40.16	38.20	34.11	46.07
Type of Practice						
Solo	33.18	25.75	35.30	33.91	29.27	39.34
Non-solo	34.56	27.18	37.46	33.94	30.48	42.74
Location						
Nonmetropolitan	24.28	22.60	26.65	25.08	24.75	27.12
Metropolitan—						
Less than 1,000,000	31.10	25.64	33.90	30.88	28.92	36.03
1,000,000 and over	38.77	30.47	39.58	38.60	31.94	46.66
Employment Status						
Self-employed	33.55	26.18	36.16	33.62	29.39	40.89
Employee	35.76	27.83	38.17	36.07	31.86	41.49
Physician Age						
Less than 36 years	33.95	27.55	35.57	35.11	29.03	37.02
36-45 years	34.07	26.23	36.60	33.96	30.20	39.95
46-55 years	35.05	28.17	37.86	33.59	29.81	40.24
56-65 years	33.59	25.76	36.14	34.45	29.49	44.54
66 or more years	30.79	25.77	33.22	33.09	.	.

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 27 (continued). **Standard Error of the Mean Fee (in dollars) for an Office Visit with an Established Patient, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.31	0.39	0.75	0.49	0.62	0.87
Census Division						
New England	1.13	1.35	2.07	2.10	.	.
Middle Atlantic	1.17	1.17	2.77	1.82	1.68	2.61
East North Central	0.47	0.71	0.97	0.83	1.04	1.81
West North Central	0.87	0.53	2.91	1.17	.	.
South Atlantic	0.61	0.92	1.00	0.91	1.67	1.82
East South Central	0.61	0.78	1.27	1.36	.	.
West South Central	0.69	0.79	2.03	0.95	2.34	2.45
Mountain	0.92	1.27	1.85	1.54	.	.
Pacific	0.71	1.66	1.29	1.26	0.96	2.12
Type of Practice						
Solo	0.39	0.56	0.70	0.64	1.02	1.13
Non-solo	0.46	0.55	1.21	0.73	0.78	1.32
Location						
Nonmetropolitan	0.38	0.45	1.11	0.98	1.10	1.25
Metropolitan—						
Less than 1,000,000	0.33	0.50	0.73	0.56	0.86	1.14
1,000,000 and over	0.55	0.89	1.25	0.82	0.97	1.28
Employment Status						
Self-employed	0.33	0.40	0.86	0.49	0.61	0.92
Employee	0.82	1.17	1.34	1.73	1.72	2.77
Physician Age						
Less than 36 years	0.87	1.39	1.34	1.36	1.10	2.46
36-45 years	0.46	0.46	0.93	0.91	1.10	1.42
46-55 years	0.77	1.24	2.43	0.87	1.27	1.51
56-65 years	0.63	0.78	1.34	1.08	1.01	2.04
66 or more years	0.78	1.06	1.21	1.51	.	.

Table 28. **Mean Fee (in dollars) for an Office Visit with an Established Patient, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	23.49	25.11	26.74	28.05	30.10	31.82	33.91
Specialty							
General/Family Practice	18.38	19.86	20.76	22.06	23.48	24.52	26.46
Internal Medicine	26.75	28.18	30.37	30.43	34.03	34.11	36.50
Surgery	23.62	24.58	26.07	28.73	29.66	32.51	33.93
Pediatrics	21.57	23.37	24.65	25.13	27.37	31.57	30.01
Obstetrics/Gynecology	26.65	29.42	31.49	32.41	34.81	36.65	40.95
Census Division							
New England	23.56	26.87	28.53	30.10	33.14	34.59	37.56
Middle Atlantic	26.26	28.34	30.46	32.51	34.85	37.13	40.44
East North Central	20.34	21.31	23.70	24.90	27.33	27.37	28.61
West North Central	18.64	19.10	21.87	21.75	24.06	26.28	28.69
South Atlantic	23.72	26.04	25.76	27.11	29.69	30.64	33.93
East South Central	20.98	21.16	21.14	23.13	23.55	26.86	26.94
West South Central	22.21	24.16	26.43	25.72	28.46	30.25	30.25
Mountain	22.89	22.43	24.58	25.39	27.05	29.24	32.01
Pacific	27.66	29.30	31.52	33.61	34.93	37.52	38.79
Type of Practice							
Solo	22.99	24.68	26.38	27.96	29.54	31.54	33.18
Non-solo	24.08	25.55	27.16	28.16	30.67	32.09	34.56
Location							
Nonmetropolitan	17.65	18.98	19.39	20.70	22.11	23.04	24.28
Metropolitan—							
Less than 1,000,000	21.85	23.64	25.26	25.44	27.50	29.51	31.10
1,000,000 and over	26.59	28.37	30.09	32.21	34.73	36.38	38.77
Physician Age							
Less than 36 years	23.15	25.84	25.76	27.94	28.53	29.90	33.95
36-45 years	23.87	25.27	27.99	28.92	30.89	31.93	34.07
46-55 years	24.60	25.53	26.82	27.42	30.13	32.35	35.05
56-65 years	22.41	24.09	25.89	28.35	31.13	31.88	33.59
66 or more years	21.84	24.27	24.81	26.07	26.85	31.96	30.79

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 28 (continued). **Standard Error of the Mean Fee (in dollars) for an Office Visit with an Established Patient , 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.24	0.23	0.24	0.26	0.29	0.26	0.31
Specialty							
General/Family Practice	0.34	0.31	0.30	0.29	0.31	0.31	0.39
Internal Medicine	0.67	0.63	0.67	0.60	0.83	0.59	0.75
Surgery	0.40	0.40	0.41	0.57	0.52	0.47	0.49
Pediatrics	0.50	0.60	0.53	0.50	0.61	0.88	0.62
Obstetrics/Gynecology	0.62	0.72	0.73	0.65	0.75	0.81	0.87
Census Division							
New England	0.80	0.82	0.99	1.37	1.19	0.99	1.13
Middle Atlantic	0.66	0.71	0.70	0.83	0.76	0.78	1.17
East North Central	0.38	0.35	0.47	0.62	0.88	0.54	0.47
West North Central	0.60	0.46	0.74	0.60	0.73	0.82	0.87
South Atlantic	0.58	0.67	0.47	0.51	0.69	0.51	0.61
East South Central	0.94	0.75	0.62	0.79	0.81	0.91	0.61
West South Central	0.60	0.53	0.82	0.52	0.58	0.71	0.69
Mountain	1.04	0.90	0.95	0.80	0.78	0.79	0.92
Pacific	0.78	0.61	0.73	0.69	0.74	0.78	0.71
Type of Practice							
Solo	0.31	0.31	0.33	0.37	0.42	0.38	0.39
Non-solo	0.37	0.35	0.36	0.37	0.39	0.37	0.46
Location							
Nonmetropolitan	0.45	0.46	0.41	0.42	0.41	0.42	0.38
Metropolitan—							
Less than 1,000,000	0.33	0.33	0.34	0.29	0.36	0.35	0.33
1,000,000 and over	0.39	0.36	0.39	0.45	0.49	0.43	0.55
Physician Age							
Less than 36 years	0.63	0.73	0.70	0.59	0.61	0.65	0.87
36-45 years	0.42	0.40	0.48	0.46	0.45	0.44	0.46
46-55 years	0.57	0.51	0.48	0.49	0.59	0.55	0.77
56-65 years	0.46	0.45	0.47	0.69	0.93	0.61	0.63
66 or more years	0.61	0.64	0.66	0.80	0.69	0.94	0.78

Table 29. **Mean Fee (in dollars) for an Office Visit with a New Patient, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	63.51	38.51	86.89	59.70	44.69	61.60
Census Division						
New England	65.52	37.40	82.09	64.42	.	.
Middle Atlantic	73.44	36.56	92.24	71.51	46.75	67.13
East North Central	51.45	34.18	71.04	45.27	41.03	48.58
West North Central	51.38	31.45	80.77	43.41	.	.
South Atlantic	65.13	38.76	88.49	58.43	47.59	62.19
East South Central	48.45	34.32	72.47	44.26	.	.
West South Central	53.58	37.16	84.57	50.29	41.57	52.95
Mountain	62.90	38.36	.	58.87	.	.
Pacific	81.09	54.12	101.65	87.17	52.73	76.34
Type of Practice						
Solo	61.29	39.03	81.78	60.05	40.27	62.56
Non-solo	65.51	37.98	90.98	59.36	47.53	60.56
Location						
Nonmetropolitan	39.83	32.06	63.78	39.94	32.00	35.89
Metropolitan—						
Less than 1,000,000	57.41	37.33	82.77	50.69	42.21	56.22
1,000,000 and over	74.61	44.83	92.49	72.73	49.33	68.90
Employment Status						
Self-employed	61.89	38.18	85.50	58.39	40.46	61.61
Employee	71.94	40.17	93.80	68.68	57.28	61.54
Physician Age						
Less than 36 years	63.81	39.67	83.96	58.29	39.71	55.93
36-45 years	67.00	37.98	88.29	61.78	45.79	61.64
46-55 years	65.48	40.41	93.31	58.10	43.85	62.57
56-65 years	60.00	36.76	82.60	62.67	45.61	63.36
66 or more years	50.76	39.88	67.36	50.51	.	.

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 29 (continued). **Standard Error of the Mean Fee (in dollars) for an Office Visit with a New Patient, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.81	0.92	1.88	1.32	1.64	1.22
Census Division						
New England	2.59	3.19	4.98	3.71	.	.
Middle Atlantic	2.43	2.29	5.37	3.12	4.21	3.19
East North Central	1.44	1.41	3.66	1.62	3.73	2.07
West North Central	2.38	1.38	6.22	2.29	.	.
South Atlantic	1.78	1.78	3.82	2.49	5.04	2.47
East South Central	2.07	2.31	5.78	2.13	.	.
West South Central	1.81	2.47	6.36	2.20	3.33	2.30
Mountain	3.40	2.70	.	4.84	.	.
Pacific	2.89	4.58	4.88	6.98	3.39	3.41
Type of Practice						
Solo	1.12	1.31	2.38	2.03	1.96	1.81
Non-solo	1.16	1.30	2.76	1.70	2.33	1.63
Location						
Nonmetropolitan	1.39	1.30	5.35	2.23	2.60	1.53
Metropolitan—						
Less than 1,000,000	0.95	1.14	2.46	1.09	2.37	1.44
1,000,000 and over	1.42	2.11	2.87	2.53	2.52	1.87
Employment Status						
Self-employed	0.84	0.88	1.96	1.42	1.33	1.30
Employee	2.41	3.04	5.53	3.42	5.06	3.44
Physician Age						
Less than 36 years	2.32	3.57	4.39	3.03	2.30	3.62
36-45 years	1.32	1.26	2.71	2.03	2.95	1.98
46-55 years	1.79	2.23	4.66	2.50	2.75	2.35
56-65 years	1.86	1.69	5.05	3.52	4.43	2.54
66 or more years	2.04	2.64	4.80	3.44	.	.

Table 30. **Mean Fee (in dollars)for an Office Visit with a New Patient, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	43.43	48.08	48.43	51.87	55.75	59.69	63.51
Specialty							
General/Family Practice	26.81	30.22	29.98	31.72	34.61	36.19	38.51
Internal Medicine	62.78	69.54	68.95	74.00	79.19	83.45	86.89
Surgery	42.32	42.67	44.49	48.28	50.20	53.95	59.70
Pediatrics	30.32	35.62	35.37	34.55	40.00	48.29	44.69
Obstetrics/Gynecology	44.60	47.87	46.85	51.62	52.98	56.61	61.60
Census Division							
New England	38.74	49.50	48.00	49.91	52.24	63.82	65.52
Middle Atlantic	48.57	53.96	54.26	58.65	65.62	68.40	73.44
East North Central	36.51	41.08	43.28	42.68	47.35	50.64	51.45
West North Central	34.04	37.16	36.10	43.28	43.07	51.07	51.38
South Atlantic	44.63	47.19	46.78	49.13	54.96	58.29	65.13
East South Central	40.07	37.75	34.75	41.37	39.79	48.63	48.45
West South Central	41.38	42.23	46.06	49.96	51.86	51.71	53.58
Mountain	39.08	42.56	44.53	44.69	49.52	53.24	62.90
Pacific	53.85	63.25	63.15	68.86	73.80	75.75	81.09
Type of Practice							
Solo	42.01	45.55	46.53	50.73	54.71	58.24	61.29
Non-solo	45.14	50.68	50.62	53.13	56.81	61.04	65.51
Location							
Nonmetropolitan	28.85	31.07	32.23	32.28	34.95	37.02	39.83
Metropolitan—							
Less than 1,000,000	41.00	44.54	45.01	47.93	50.43	55.85	57.41
1,000,000 and over	49.46	56.36	55.95	60.36	66.34	69.30	74.61
Physician Age							
Less than 36 years	44.09	51.14	47.02	52.30	53.50	53.89	63.81
36-45 years	45.85	48.87	51.75	54.02	58.14	61.63	67.00
46-55 years	43.72	49.04	48.43	52.27	55.06	61.66	65.48
56-65 years	39.80	44.19	45.01	49.41	57.93	58.30	60.00
66 or more years	40.00	45.37	44.23	46.97	45.96	54.88	50.76

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 30 (continued). **Standard Error of the Mean Fee (in dollars) for an Office Visit with a New Patient, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.62	0.71	0.64	0.72	0.81	0.79	0.81
Specialty							
General/Family Practice	0.66	0.75	0.69	0.72	0.99	0.86	0.92
Internal Medicine	1.84	2.11	1.89	2.22	2.12	2.01	1.88
Surgery	0.88	0.93	0.90	1.01	1.09	1.14	1.32
Pediatrics	1.18	1.68	1.23	1.17	2.15	2.18	1.64
Obstetrics/Gynecology	1.62	1.76	0.99	1.11	1.20	1.16	1.22
Census Division							
New England	2.31	2.64	2.35	2.52	2.47	4.31	2.59
Middle Atlantic	1.63	1.88	1.88	1.88	2.25	2.13	2.43
East North Central	1.12	1.48	1.33	1.37	1.61	1.58	1.44
West North Central	1.84	1.90	1.77	2.53	2.26	2.51	2.38
South Atlantic	1.58	1.66	1.43	1.44	2.00	1.69	1.78
East South Central	2.11	1.72	1.52	2.48	1.88	2.23	2.07
West South Central	2.23	1.37	1.83	2.60	2.23	2.13	1.81
Mountain	2.07	3.10	2.31	2.20	2.59	2.64	3.40
Pacific	1.87	2.43	1.99	2.17	2.66	2.47	2.89
Type of Practice							
Solo	0.83	0.96	0.85	0.97	1.16	1.15	1.12
Non-solo	0.95	1.04	0.98	1.07	1.14	1.10	1.16
Location							
Nonmetropolitan	1.04	1.09	1.05	0.96	1.38	1.10	1.39
Metropolitan—							
Less than 1,000,000	0.82	0.89	0.83	0.98	0.97	1.10	0.95
1,000,000 and over	1.07	1.27	1.11	1.19	1.42	1.30	1.42
Physician Age							
Less than 36 years	1.95	2.21	1.90	1.85	2.30	1.99	2.32
36-45 years	1.06	1.12	1.20	1.20	1.22	1.30	1.32
46-55 years	1.24	1.46	1.29	1.51	1.69	1.59	1.79
56-65 years	1.23	1.34	1.27	1.73	2.52	1.99	1.86
66 or more years	2.28	3.14	1.96	2.20	1.57	2.56	2.04

Table 31. **Mean Fee (in dollars) for a Follow-up Hospital Visit, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	37.57	31.42	38.67	38.20	38.36	40.07
Census Division						
New England	39.75	.	36.91	41.75	.	.
Middle Atlantic	43.43	35.22	43.59	44.63	36.17	48.20
East North Central	32.39	27.49	34.33	33.66	32.02	35.49
West North Central	30.52	26.18	31.91	27.70	.	.
South Atlantic	40.13	35.14	39.81	42.25	41.65	37.47
East South Central	28.58	26.00	30.92	27.78	.	.
West South Central	35.33	30.68	34.63	33.69	46.19	34.47
Mountain	32.58	28.69	.	33.55	.	.
Pacific	42.76	39.49	43.79	42.57	43.79	44.74
Type of Practice						
Solo	38.27	31.95	39.40	39.87	36.39	42.71
Non-solo	36.98	30.89	38.09	36.44	39.63	37.11
Location						
Nonmetropolitan	28.44	27.44	29.30	29.16	25.14	.
Metropolitan—						
Less than 1,000,000	34.91	31.02	36.55	34.84	35.25	34.93
1,000,000 and over	42.34	35.40	41.30	43.67	43.63	45.23
Employment Status						
Self-employed	37.03	31.49	38.66	38.02	35.65	39.91
Employee	40.65	30.97	38.72	39.62	47.47	.
Physician Age						
Less than 36 years	37.84	30.67	37.97	38.25	46.79	.
36-45 years	37.92	31.97	39.05	38.30	37.16	40.64
46-55 years	38.44	33.92	38.72	38.74	33.94	41.33
56-65 years	36.54	30.14	38.23	38.04	42.50	35.92
66 or more years	35.20	30.05	37.56	35.34	.	.

Source: 1988 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Excludes physicians in radiology, psychiatry, anesthesiology, and pathology, but otherwise includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 31 (continued). **Standard Error of the Mean Fee (in dollars) for a Follow-up Hospital Visit, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	0.38	0.52	0.59	0.79	1.40	1.33
Census Division						
New England	1.40	.	1.52	2.56	.	.
Middle Atlantic	1.08	2.02	1.51	2.49	2.66	3.38
East North Central	0.67	0.75	1.26	1.60	2.29	2.10
West North Central	1.13	0.85	1.39	1.66	.	.
South Atlantic	0.95	1.57	1.46	1.98	3.71	2.93
East South Central	0.97	1.56	1.65	2.01	.	.
West South Central	1.12	1.30	1.62	1.68	5.01	3.65
Mountain	1.29	1.79	.	2.57	.	.
Pacific	0.95	1.54	1.29	2.17	4.07	3.54
Type of Practice						
Solo	0.57	0.83	0.86	1.21	2.03	1.79
Non-solo	0.50	0.66	0.81	1.00	1.87	1.94
Location						
Nonmetropolitan	0.67	0.78	1.83	1.65	2.36	.
Metropolitan—						
Less than 1,000,000	0.54	0.87	0.95	1.05	2.02	1.60
1,000,000 and over	0.59	0.92	0.76	1.27	2.09	2.20
Employment Status						
Self-employed	0.38	0.58	0.60	0.84	1.27	1.36
Employee	1.22	1.23	2.00	2.31	4.20	.
Physician Age						
Less than 36 years	1.06	1.17	1.60	2.01	5.78	.
36-45 years	0.62	0.80	0.92	1.47	2.48	1.87
46-55 years	0.76	1.61	1.32	1.31	1.83	2.74
56-65 years	0.86	1.19	1.36	1.74	3.00	2.80
66 or more years	1.35	1.45	2.17	3.60	.	.

Table 32. **Mean Fee (in dollars) for a Follow-up Hospital Visit, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	24.04	29.04	30.08	31.59	33.13	35.73	35.57
Specialty							
General/Family Practice	21.76	24.62	24.80	26.80	27.04	31.29	31.42
Internal Medicine	28.39	31.65	33.61	34.06	35.19	37.33	38.67
Surgery	21.96	28.29	29.26	30.69	33.42	35.97	38.20
Pediatrics	25.69	27.71	29.55	30.69	33.32	35.70	38.36
Obstetrics/Gynecology	21.43	31.59	30.81	33.56	34.82	37.92	40.07
Census Division							
New England	21.63	26.88	31.02	30.01	30.72	35.83	39.75
Middle Atlantic	27.11	31.84	36.78	37.96	38.20	41.96	43.43
East North Central	21.58	26.73	27.35	28.87	30.80	30.84	32.39
West North Central	18.85	22.07	23.57	24.03	26.54	29.17	30.52
South Atlantic	23.46	29.18	29.59	30.65	34.26	36.82	40.13
East South Central	19.47	21.81	22.53	24.60	26.33	29.37	28.58
West South Central	23.95	29.54	28.45	30.85	31.21	34.21	35.33
Mountain	25.82	25.11	27.19	29.70	30.30	31.80	32.58
Pacific	29.31	36.17	34.68	36.52	38.38	42.23	42.76
Type of Practice							
Solo	24.50	29.86	30.67	32.31	33.73	35.71	38.27
Non-solo	23.54	28.23	29.46	30.84	32.55	35.75	36.98
Location							
Nonmetropolitan	19.96	22.17	23.19	24.57	25.18	28.08	28.44
Metropolitan—							
Less than 1,000,000	22.33	26.53	27.28	27.88	29.68	32.94	34.91
1,000,000 and over	27.00	33.65	34.64	36.63	38.65	40.67	42.34
Physician Age							
Less than 36 years	24.92	29.24	29.28	30.74	33.46	34.94	37.84
36-45 years	24.14	29.03	30.41	33.21	33.55	35.80	37.92
46-55 years	25.17	29.54	30.27	30.68	33.23	36.49	38.44
56-65 years	22.11	28.96	30.43	30.56	33.57	35.86	36.54
66 or more years	22.96	26.93	28.00	30.70	29.03	33.13	35.20

Source: 1982-1988, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties except radiology, psychiatry, anesthesiology, and pathology. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 32 (continued). **Standard Error of the Mean Fee (in dollars) for a Follow-up Hospital Visit, 1982-1988**[a]

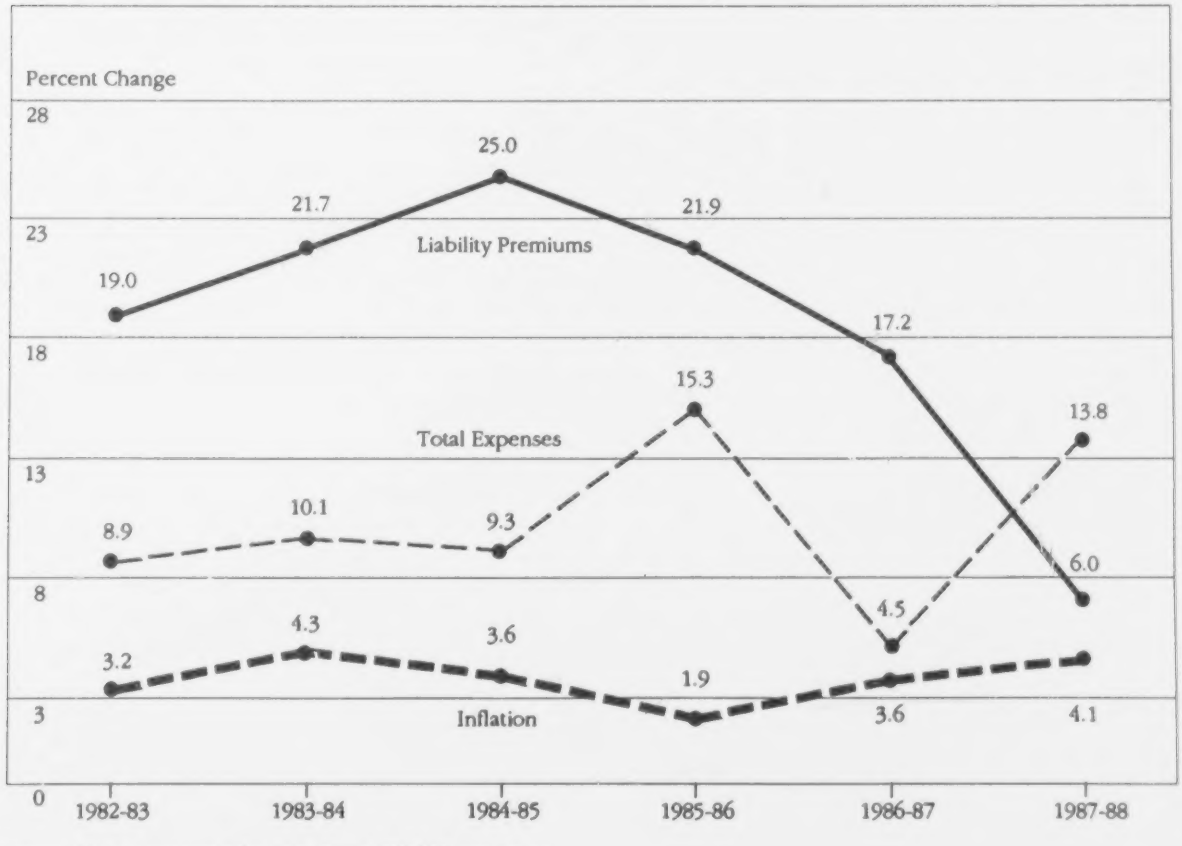
	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.32	0.39	0.35	0.36	0.36	0.39	0.38
Specialty							
General/Family Practice	0.48	0.63	0.48	0.49	0.50	0.68	0.52
Internal Medicine	0.78	0.86	0.80	0.73	0.57	0.67	0.59
Surgery	0.55	0.70	0.62	0.67	0.80	0.82	0.79
Pediatrics	0.88	1.17	1.00	1.08	1.07	1.13	1.40
Obstetrics/Gynecology	1.03	1.76	1.17	1.41	1.40	1.48	1.33
Census Division							
New England	1.08	1.11	1.51	1.24	0.96	1.20	1.40
Middle Atlantic	1.02	1.04	1.17	1.02	1.12	1.13	1.08
East North Central	0.57	0.97	0.82	1.02	0.93	0.69	0.67
West North Central	0.88	1.06	0.87	0.91	1.06	1.22	1.13
South Atlantic	0.78	0.90	0.75	0.75	0.96	1.06	0.95
East South Central	0.78	0.76	0.76	1.12	1.19	1.22	0.97
West South Central	0.86	1.14	0.79	0.84	0.70	0.88	1.12
Mountain	1.44	1.43	1.11	1.60	1.12	1.25	1.29
Pacific	0.93	1.25	0.95	0.92	0.76	1.14	0.95
Type of Practice							
Solo	0.46	0.62	0.50	0.51	0.50	0.56	0.57
Non-solo	0.42	0.49	0.48	0.51	0.51	0.54	0.50
Location							
Nonmetropolitan	0.69	0.63	0.56	0.68	0.68	0.94	0.67
Metropolitan—							
Less than 1,000,000	0.42	0.53	0.47	0.42	0.46	0.53	0.54
1,000,000 and over	0.54	0.68	0.58	0.62	0.58	0.61	0.59
Physician Age							
Less than 36 years	0.88	1.06	0.91	0.82	1.05	1.05	1.06
36-45 years	0.55	0.65	0.61	0.71	0.59	0.62	0.62
46-55 years	0.64	0.81	0.66	0.64	0.66	0.82	0.76
56-65 years	0.68	1.00	0.78	0.80	0.96	0.97	0.86
66 or more years	1.03	1.05	1.33	1.10	1.03	1.11	1.35

Professional Expenses of Physicians

Professional expense information reported from the Socioeconomic Monitoring System refers to tax-deductible professional expenses from medical practice, not including contributions made for physicians into deferred compensation plans. Non-solo practitioners are asked to report only their share of their practices' total expenses. The major components of total expenses are defined as follows: (1) office expenses, including rent or mortgage for office space, telephones, and utilities; (2) total nonphysician payroll expenses, including fringe benefits; (3) medical materials and supplies, such as drugs, x-ray films, and outside expenses for laboratory work and other services; (4) depreciation, lease, and rent for medical equipment; and (5) professional medical liability insurance premiums. Other expenses are not separately itemized in the surveys.

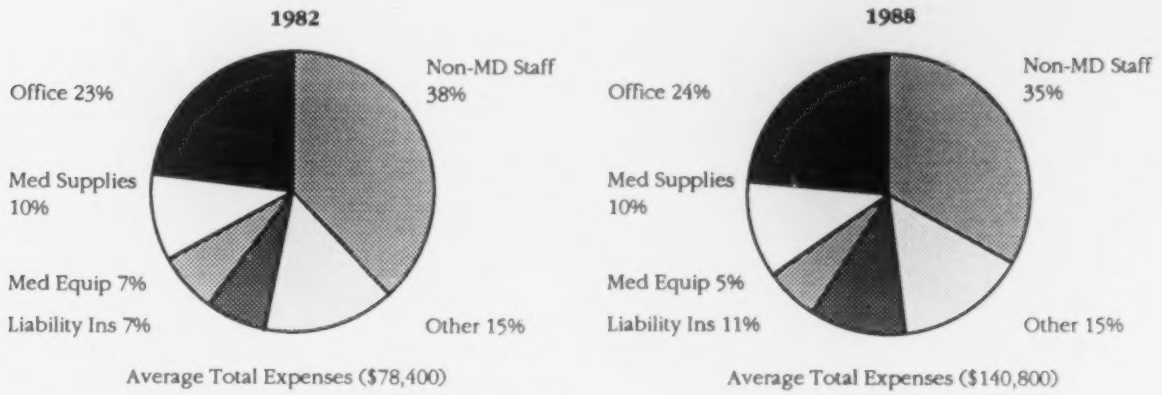
Figure 13 shows that total professional expenses increased 13.8% between 1987 and 1988. Professional liability insurance premiums increased only 6%. However, premiums as a percent of total professional expenses increased from 7% in 1982 to 11% in 1988 (see Figure 14). Geographic patterns in average total professional expenses are indicated in Figure 15.

Figure 13. **Percent Change in Average Total Professional Expenses and Professional Liability Insurance Premiums of Self-Employed Physicians, 1982-1988**



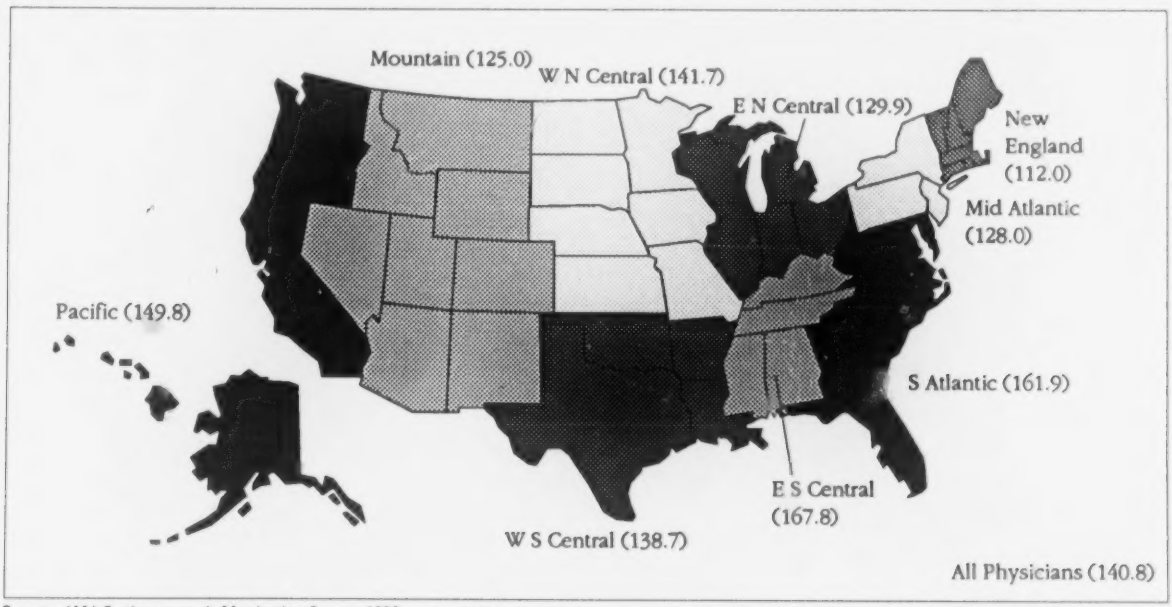
Source: AMA Socioeconomic Monitoring System 1983-1989 core surveys.

Figure 14. **Distribution of Average Professional Expenses of Self-Employed Physicians, 1982 and 1988**



Source: AMA Socioeconomic Monitoring System 1983 and 1989 core surveys.

Figure 15. **Average Professional Expenses (in thousands of dollars) of Self-Employed Physicians, by Census Division, 1988**



Source: AMA Socioeconomic Monitoring System 1989 core survey.

Table 33. **Mean Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	140.8	122.3	136.3	188.2	115.3	139.6
Census Division						
New England	112.0	.	116.4	186.5	.	.
Middle Atlantic	128.0	93.5	117.7	158.3	123.5	188.4
East North Central	129.9	120.4	120.0	180.3	128.5	220.3
West North Central	141.7	122.7	.	170.3	.	.
South Atlantic	161.9	122.3	160.2	222.1	114.5	232.4
East South Central	167.8	159.2	.	233.6	.	.
West South Central	138.7	135.8	159.1	164.5	100.7	154.1
Mountain	125.0	132.6	.	156.2	.	.
Pacific	149.8	125.9	145.5	200.3	117.4	.
Type of Practice						
Solo	120.1	108.0	114.3	163.8	102.8	163.3
Non-solo	167.2	148.2	164.3	218.5	127.5	221.6
Location						
Nonmetropolitan	128.8	124.2	118.7	147.3	.	.
Metropolitan—	147.3	130.6	141.5	205.4	109.0	185.4
Less than 1,000,000						
1,000,000 and over	136.9	109.8	134.2	179.0	121.6	193.4
Physician Age						
Less than 36 years	111.2	125.7	98.7	194.1	.	.
36-45 years	149.8	147.4	150.3	208.2	105.7	207.3
46-55 years	158.3	126.9	144.8	200.7	134.1	223.7
56-65 years	132.2	107.1	128.9	170.3	112.5	165.9
66 or more years	96.7	82.8	86.5	113.9	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 33 (continued). **Standard Error of Mean Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1988[a]**

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	2.95	4.92	7.00	6.23	6.88	9.87
Census Division						
New England	9.34	.	17.11	27.20	.	.
Middle Atlantic	7.30	12.73	13.19	12.83	18.30	22.04
East North Central	6.86	16.21	14.11	15.44	21.46	29.61
West North Central	9.26	10.77	.	17.04	.	.
South Atlantic	8.73	9.54	24.47	17.81	15.94	32.52
East South Central	11.87	19.41	.	29.55	.	.
West South Central	6.75	13.86	26.05	15.24	9.48	15.17
Mountain	8.66	17.60	.	17.11	.	.
Pacific	8.55	11.70	14.50	15.29	15.54	.
Type of Practice						
Solo	3.33	6.38	6.81	7.47	8.55	11.34
Non-solo	4.96	7.19	12.59	10.02	10.40	15.91
Location						
Nonmetropolitan	6.75	7.17	17.25	19.58	.	.
Metropolitan—						
Less than 1,000,000	4.51	7.14	11.55	9.55	8.25	15.93
1,000,000 and over	4.54	10.90	9.49	8.72	11.74	13.44
Physician Age						
Less than 36 years	6.72	12.69	11.06	21.65	.	.
36-45 years	5.20	10.47	10.19	13.86	9.01	16.77
46-55 years	6.89	9.52	18.65	10.47	16.69	22.03
56-65 years	5.31	8.26	12.45	11.69	11.61	15.02
66 or more years	6.54	9.74	12.76	12.04	.	.

Table 34. **Mean Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	72.7	78.4	85.4	94.0	102.7	118.4	123.7	140.8
Specialty								
General/Family Practice	70.9	75.3	79.4	89.2	96.5	119.9	121.2	122.3
Internal Medicine	72.5	74.9	88.5	89.7	90.0	110.5	117.8	136.3
Surgery	89.2	103.7	112.3	128.9	135.7	148.6	164.7	188.2
Pediatrics	61.2	67.7	64.1	77.8	87.3	93.2	100.2	115.3
Obstetrics/Gynecology	98.9	108.3	108.5	121.6	131.9	149.5	173.2	189.6
Census Division								
New England	53.0	72.7	72.1	64.4	85.8	94.6	105.6	112.0
Middle Atlantic	64.7	59.8	71.6	83.6	82.6	105.4	110.1	128.0
East North Central	70.4	73.3	84.1	85.2	93.7	106.3	117.7	129.9
West North Central	78.2	87.1	86.0	100.2	102.7	132.6	135.7	141.7
South Atlantic	74.9	81.6	91.1	101.2	109.0	130.8	129.2	161.9
East South Central	91.0	82.6	88.8	102.4	106.6	133.0	127.3	167.8
West South Central	83.7	99.2	105.4	118.8	124.7	138.9	137.4	138.7
Mountain	63.0	77.2	71.5	85.3	112.2	104.6	117.2	125.0
Pacific	77.6	77.6	89.1	98.2	109.5	117.6	130.9	149.8
Type of Practice								
Solo	70.4	72.4	77.2	85.4	90.5	100.7	110.4	120.1
Non-solo	77.7	86.3	98.8	108.0	120.8	144.4	142.3	167.2
Location								
Nonmetropolitan	66.2	79.6	85.5	85.0	91.4	119.7	116.0	128.8
Metropolitan—								
Less than 1,000,000	79.3	77.9	91.5	98.0	106.2	123.3	130.7	147.3
1,000,000 and over	68.5	78.5	79.4	92.5	102.3	112.9	118.5	136.9
Physician Age								
Less than 36 years	52.6	57.2	67.2	90.4	80.4	90.9	100.0	111.2
36-45 years	79.0	76.7	89.5	96.8	101.7	123.7	127.7	149.8
46-55 years	86.9	96.0	99.2	105.0	114.1	127.9	129.5	158.3
56-65 years	66.9	79.6	80.4	86.0	107.0	119.8	130.0	132.2
66 or more years	69.0	58.2	61.5	69.1	89.4	93.4	95.1	96.7

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 34 (continued). **Standard Error of the Mean Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	2.32	1.78	1.68	2.14	2.48	2.60	2.58	2.95
Specialty								
General/Family Practice	4.10	2.80	3.24	4.04	4.83	7.01	6.56	4.92
Internal Medicine	5.47	3.80	4.88	5.19	4.35	4.96	4.97	7.00
Surgery	5.14	4.98	3.72	6.17	5.80	5.16	5.88	6.23
Pediatrics	9.13	4.85	3.00	3.91	5.43	6.29	5.09	6.88
Obstetrics/Gynecology	11.87	6.00	4.94	6.08	6.45	8.08	8.02	9.87
Census Division								
New England	6.42	7.60	5.53	5.56	13.62	9.30	11.75	9.34
Middle Atlantic	4.61	4.01	3.88	6.01	4.86	5.73	5.66	7.30
East North Central	5.66	3.64	4.39	3.67	5.24	6.13	5.84	6.86
West North Central	5.89	7.90	6.09	7.75	12.14	11.20	14.55	9.26
South Atlantic	6.99	4.72	4.19	5.86	6.71	6.50	5.79	8.73
East South Central	16.37	7.08	5.06	7.11	7.78	9.69	7.37	11.87
West South Central	6.46	5.51	6.75	6.73	9.12	9.76	7.72	6.75
Mountain	6.73	5.70	5.14	7.68	9.62	8.44	9.34	8.66
Pacific	5.24	4.63	4.14	5.61	5.36	6.53	7.64	8.55
Type of Practice								
Solo	2.72	1.93	1.95	2.35	2.55	2.57	2.82	3.33
Non-solo	4.34	3.21	3.00	4.01	4.71	4.99	4.58	4.96
Location								
Nonmetropolitan	4.47	4.64	4.83	3.74	4.69	6.21	5.56	6.75
Metropolitan—								
Less than 1,000,000	4.29	2.50	2.53	3.48	3.86	4.01	4.29	4.51
1,000,000 and over	2.96	2.94	2.54	3.20	3.88	3.99	3.61	4.54
Physician Age								
Less than 36 years	3.63	3.32	3.82	7.87	4.85	4.74	6.45	6.72
36-45 years	4.35	3.11	3.22	3.24	4.02	4.62	5.18	5.20
46-55 years	5.84	4.25	3.51	5.32	5.20	5.72	4.55	6.89
56-65 years	3.90	3.72	3.34	3.63	5.87	5.44	5.43	5.31
66 or more years	8.69	3.39	4.19	4.11	10.00	8.04	7.11	6.54

Table 35. **Median Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1988**[a]

		Specialty				
	All Physicians[b]	General/Family Practice	Internal Medicine	Surgery	Pediatrics	Obstetrics/ Gynecology
All Physicians	109	98	104	151	100	164
Census Division						
New England	94	.	97	133	.	.
Middle Atlantic	92	70	84	140	115	160
East North Central	95	91	92	150	103	192
West North Central	125	140	.	155	.	.
South Atlantic	123	108	123	168	84	180
East South Central	128	164	.	172	.	.
West South Central	125	98	139	146	102	139
Mountain	94	93	.	140	.	.
Pacific	115	110	127	180	105	.
Type of Practice						
Solo	91	94	90	136	97	139
Non-solo	135	138	130	175	105	187
Location						
Nonmetropolitan	110	114	96	124	.	.
Metropolitan—						
Less than 1,000,000	113	104	110	170	99	151
1,000,000 and over	101	87	101	150	103	173
Physician Age						
Less than 36 years	93	110	84	183	.	.
36-45 years	121	128	130	173	98	171
46-55 years	120	115	95	169	103	192
56-65 years	103	90	104	140	113	159
66 or more years	71	64	73	101	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 36. **Median Professional Expenses (in thousands of dollars) of Self-Employed Physicians, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	50	61	67	75	78	89	99	109
Specialty								
General/Family Practice	56	63	68	75	81	92	96	98
Internal Medicine	60	66	67	73	74	91	100	104
Surgery	68	74	97	104	105	116	133	151
Pediatrics	45	55	61	69	73	76	89	100
Obstetrics/Gynecology	72	96	99	106	116	124	149	164
Census Division								
New England	40	52	55	50	57	66	81	94
Middle Atlantic	50	49	53	68	61	81	80	92
East North Central	50	60	64	72	71	75	96	95
West North Central	80	65	68	80	82	102	103	125
South Atlantic	50	60	71	77	79	100	103	123
East South Central	60	68	82	88	85	104	116	128
West South Central	63	80	78	94	91	97	108	125
Mountain	50	63	62.	66	84	82	97	94
Pacific	60	63	71	74	90	92	102	115
Type of Practice								
Solo	50	60	60	69	71	80	90	91
Non-solo	60	64	80	84	90	106	113	135
Location								
Nonmetropolitan	55	64	70	77	80	95	96	110
Metropolitan—								
Less than 1,000,000	56	63	72	77	80	93	102	113
1,000,000 and over	50	59	60	69	73	82	96	101
Physician Age								
Less than 36 years	40	49	58	70	65	79	82	93
36-45 years	55	63	71	78	79	93	100	121
46-55 years	62	70	83	84	91	96	107	120
56-65 years	50	62	60	71	79	89	101	103
66 or more years	45	50	46	55	57	67	69	71

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 37. **Mean Nonphysician Personnel Payroll (in thousands of dollars) per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	30.1	29.0	31.2	35.6	38.8	42.5	48.4
Specialty							
General/Family Practice	30.4	29.9	31.2	37.3	42.5	42.6	44.6
Internal Medicine	29.4	31.2	32.3	30.8	35.3	43.7	51.5
Surgery	38.3	37.9	42.0	43.0	48.1	58.3	61.3
Pediatrics	25.1	25.3	29.5	33.1	35.3	33.7	39.9
Obstetrics/Gynecology	45.8	33.3	36.8	42.8	45.7	48.1	64.4
Census Division							
New England	30.5	24.3	21.3	25.3	28.7	36.6	34.9
Middle Atlantic	19.8	23.3	26.6	26.4	34.2	35.5	40.8
East North Central	28.2	28.2	28.6	31.1	33.3	40.0	46.2
West North Central	37.6	30.2	37.6	37.7	49.3	51.2	48.8
South Atlantic	31.7	31.8	34.8	41.4	40.5	46.6	57.9
East South Central	35.4	33.6	38.6	50.3	49.6	47.1	64.2
West South Central	38.3	38.7	36.4	46.0	50.2	44.0	47.3
Mountain	28.0	23.7	25.2	33.3	28.3	37.1	38.6
Pacific	28.2	27.5	32.3	34.5	39.1	45.9	51.2
Type of Practice							
Solo	26.0	24.2	25.9	29.2	31.8	35.9	40.2
Non-solo	35.7	36.7	40.1	45.6	50.0	52.9	60.2
Location							
Nonmetropolitan	34.7	31.3	29.7	33.7	43.0	43.2	52.0
Metropolitan—							
Less than 1,000,000	29.9	32.6	33.1	37.8	41.6	46.5	52.2
1,000,000 and over	28.9	25.0	29.8	33.8	34.8	38.5	43.6
Physician Age							
Less than 36 years	19.3	23.7	29.8	24.5	30.5	33.3	40.1
36-45 years	30.6	29.5	31.2	35.0	40.0	44.1	51.6
46-55 years	34.9	33.4	35.6	40.6	42.1	45.0	54.7
56-65 years	31.3	28.2	29.1	37.9	41.0	44.8	42.5
66 or more years	27.0	22.3	22.9	31.2	26.3	31.2	37.5

Source: 1983-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 37 (continued). **Standard Error of the Mean Nonphysician Personnel Payroll (in thousands of dollars) per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.84	0.70	0.85	1.20	1.18	1.14	1.28
Specialty							
General/Family Practice	1.44	1.47	1.46	2.13	2.64	2.68	2.58
Internal Medicine	1.81	2.06	2.27	1.99	1.86	2.16	3.10
Surgery	2.35	1.55	2.53	2.19	2.32	2.81	2.76
Pediatrics	2.15	1.59	1.68	2.33	3.16	2.27	2.87
Obstetrics/Gynecology	3.44	1.88	2.17	3.36	6.30	2.94	5.40
Census Division							
New England	4.16	2.69	2.37	3.46	2.93	4.42	3.31
Middle Atlantic	1.37	1.74	2.55	1.98	3.82	2.48	3.04
East North Central	1.62	1.76	1.54	2.04	2.61	2.55	3.19
West North Central	3.74	2.69	3.94	4.45	4.80	5.49	4.28
South Atlantic	2.21	1.78	2.26	3.56	2.40	2.89	3.58
East South Central	3.47	2.45	3.17	5.21	4.29	3.34	5.56
West South Central	2.55	2.67	2.26	5.97	4.46	2.93	2.99
Mountain	3.01	2.28	2.16	3.05	2.67	3.65	3.82
Pacific	2.34	1.53	2.21	2.10	2.94	3.63	3.73
Type of Practice							
Solo	0.84	0.73	0.82	0.92	1.07	1.17	1.49
Non-solo	1.60	1.35	1.76	2.63	2.47	2.14	2.16
Location							
Nonmetropolitan	2.71	2.14	1.42	1.96	2.91	2.76	3.92
Metropolitan—							
Less than 1,000,000	1.01	1.11	1.36	1.74	1.92	1.93	1.89
1,000,000 and over	1.47	0.97	1.32	2.01	1.69	1.52	1.93
Physician Age							
Less than 36 years	1.31	1.78	3.04	1.47	2.46	2.46	3.25
36-45 years	1.68	1.29	1.38	1.90	2.07	2.18	2.46
46-55 years	1.88	1.40	2.11	2.83	2.98	2.27	2.66
56-65 years	1.55	1.49	1.36	3.09	2.22	2.43	2.16
66 or more years	2.31	2.24	1.59	2.90	2.15	2.67	3.81

Table 38. **Mean Office Expenses (in thousands of dollars) per Self-Employed Physician, 1982-1988[a]**

	1982	1983	1984	1985	1986	1987	1988
All Physicians	17.8	21.2	24.4	26.4	28.5	30.0	34.0
Specialty							
General/Family Practice	18.2	20.5	23.1	25.0	29.2	30.0	32.5
Internal Medicine	18.6	24.2	22.6	25.9	28.0	28.7	35.5
Surgery	22.2	26.2	33.0	32.1	38.0	38.2	43.7
Pediatrics	17.5	20.8	23.7	23.1	20.8	31.1	29.0
Obstetrics/Gynecology	24.9	25.3	31.1	36.6	37.8	42.7	43.0
Census Division							
New England	14.5	18.4	16.9	27.4	20.1	23.9	24.9
Middle Atlantic	16.5	20.6	22.1	20.9	28.8	27.0	31.5
East North Central	14.5	20.0	19.8	25.8	21.6	27.4	32.1
West North Central	18.1	20.6	30.9	26.3	30.8	27.6	32.6
South Atlantic	18.6	22.7	26.4	24.5	30.4	30.0	34.1
East South Central	17.2	23.0	23.9	26.1	30.5	32.8	33.5
West South Central	23.2	22.7	31.7	32.1	37.2	32.6	40.9
Mountain	15.6	17.2	20.7	27.2	23.7	28.1	31.2
Pacific	19.4	22.1	26.7	30.1	30.2	36.9	38.9
Type of Practice							
Solo	17.4	20.3	23.4	25.0	26.7	28.3	32.0
Non-solo	18.3	22.6	26.1	28.7	31.3	32.4	37.0
Location							
Nonmetropolitan	16.4	21.7	19.9	21.6	28.1	26.2	26.9
Metropolitan—							
Less than 1,000,000	17.7	21.1	25.4	26.9	26.4	29.8	34.1
1,000,000 and over	18.3	21.1	24.7	27.2	30.8	31.0	35.7
Physician Age							
Less than 36 years	13.8	18.2	24.9	24.1	26.1	28.6	26.6
36-45 years	17.5	23.1	25.7	26.3	29.1	30.4	37.9
46-55 years	20.9	22.9	25.4	29.4	30.1	30.6	36.3
56-65 years	18.5	18.8	22.2	23.7	29.3	31.6	31.9
66 or more years	13.2	16.6	19.9	26.5	20.3	23.3	23.1

Source: 1983-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 38 (continued). **Standard Error of the Mean Office Expenses (in thousands of dollars) per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.49	0.51	0.77	0.81	0.84	0.87	0.97
Specialty							
General/Family Practice	1.07	1.13	1.44	1.83	2.17	1.87	2.12
Internal Medicine	1.15	1.51	1.38	1.62	1.78	1.62	2.54
Surgery	1.16	1.12	2.29	1.72	2.08	2.28	2.05
Pediatrics	1.74	1.50	2.07	1.93	1.59	2.68	2.88
Obstetrics/Gynecology	2.69	1.65	2.82	3.03	3.07	3.35	3.71
Census Division							
New England	1.56	1.78	1.81	6.03	2.11	3.31	3.80
Middle Atlantic	1.39	1.33	1.89	1.59	2.27	2.02	2.18
East North Central	0.88	1.23	1.23	2.08	1.48	2.01	2.41
West North Central	1.83	1.83	4.51	3.72	3.50	5.59	3.87
South Atlantic	1.27	1.25	1.93	1.50	2.26	1.66	2.15
East South Central	1.83	2.32	2.49	2.64	3.75	3.45	3.50
West South Central	1.75	1.56	3.62	2.43	3.25	2.05	3.38
Mountain	1.41	1.70	1.98	3.69	2.13	2.59	3.70
Pacific	1.38	1.30	1.74	1.99	1.88	2.75	2.82
Type of Practice							
Solo	0.59	0.60	0.91	0.97	0.93	0.99	1.15
Non-solo	0.83	0.90	1.36	1.41	1.57	1.55	1.66
Location							
Nonmetropolitan	1.25	1.61	1.46	1.75	2.52	1.94	2.37
Metropolitan—							
Less than 1,000,000	0.74	0.75	1.22	1.35	1.02	1.19	1.36
1,000,000 and over	0.76	0.75	1.17	1.16	1.46	1.48	1.61
Physician Age							
Less than 36 years	0.96	1.38	2.62	2.21	2.73	3.81	2.34
36-45 years	0.91	1.05	1.40	1.28	1.45	1.51	1.92
46-55 years	1.02	0.95	1.68	1.67	1.88	1.47	1.93
56-65 years	1.12	0.89	1.25	1.37	1.66	1.88	1.83
66 or more years	1.29	1.41	1.74	4.34	1.49	2.19	2.18

Table 39. **Mean Expenditures (in thousands of dollars) on Medical Supplies per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	7.6	9.3	10.7	11.2	13.2	13.5	14.5
Specialty							
General/Family Practice	10.8	11.6	13.7	14.8	17.6	17.2	16.2
Internal Medicine	7.5	10.9	11.0	11.5	14.9	16.8	15.1
Surgery	8.8	11.4	13.7	13.8	13.4	13.8	17.4
Pediatrics	7.4	7.2	9.6	12.6	14.8	16.6	20.7
Obstetrics/Gynecology	9.6	11.1	13.3	12.2	14.1	17.4	18.5
Census Division							
New England	5.0	6.4	4.7	10.1	10.3	9.5	9.5
Middle Atlantic	4.7	8.4	8.1	7.3	10.0	12.2	11.5
East North Central	7.0	8.0	10.4	10.1	11.0	13.6	14.0
West North Central	9.5	10.2	9.1	14.2	17.3	17.6	13.5
South Atlantic	7.8	8.9	12.4	12.1	14.6	13.1	16.9
East South Central	8.5	11.9	14.6	12.2	17.7	13.5	18.2
West South Central	11.3	13.2	15.6	15.3	18.4	15.7	17.2
Mountain	7.9	7.8	10.3	13.9	14.3	12.3	11.8
Pacific	7.7	9.5	10.6	10.7	10.8	13.8	15.4
Type of Practice							
Solo	7.1	8.6	10.3	9.9	11.0	12.5	12.8
Non-solo	8.3	10.3	11.5	13.4	16.9	15.0	16.8
Location							
Nonmetropolitan	9.2	9.2	11.9	13.5	15.5	17.1	14.5
Metropolitan—							
Less than 1,000,000	7.5	10.2	11.9	11.3	14.7	13.5	15.5
1,000,000 and over	7.3	8.4	9.5	10.6	11.1	12.6	13.5
Physician Age							
Less than 36 years	6.2	7.0	10.0	10.3	11.9	11.8	12.3
36-45 years	7.3	8.9	11.1	11.1	12.7	14.7	15.1
46-55 years	9.0	10.8	11.4	11.5	16.8	12.8	16.2
56-65 years	7.7	9.5	9.9	12.3	12.1	13.8	13.3
66 or more years	6.6	8.6	10.2	9.9	8.9	11.2	11.1

Source: 1983-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 39 (continued). **Standard Error of the Mean Expenditures (in thousands of dollars) on Medical Supplies per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.29	0.29	0.42	0.48	0.66	0.54	0.57
Specialty							
General/Family Practice	0.58	0.61	1.10	1.18	1.49	1.53	1.06
Internal Medicine	0.65	0.87	0.93	1.19	2.01	1.38	1.29
Surgery	0.68	0.73	1.06	1.15	1.44	1.09	1.37
Pediatrics	0.76	0.56	0.77	1.31	1.30	1.68	2.16
Obstetrics/Gynecology	1.16	0.88	1.10	1.18	1.64	1.88	1.91
Census Division							
New England	0.63	0.80	0.69	3.06	3.34	2.01	1.51
Middle Atlantic	0.59	0.78	0.79	0.80	0.94	1.12	1.19
East North Central	0.64	0.74	0.94	1.00	1.13	1.47	1.56
West North Central	1.31	0.97	1.26	3.49	2.80	3.24	1.24
South Atlantic	0.64	0.62	1.03	1.03	1.50	1.01	1.48
East South Central	1.10	1.20	2.22	1.10	2.92	1.40	2.56
West South Central	1.10	1.18	1.62	1.60	2.82	1.56	1.83
Mountain	1.19	0.81	1.49	1.91	4.32	2.58	1.54
Pacific	0.82	0.76	1.26	1.14	1.02	1.57	1.71
Type of Practice							
Solo	0.37	0.36	0.51	0.50	0.69	0.63	0.63
Non-solo	0.46	0.49	0.73	0.93	1.29	0.96	1.02
Location							
Nonmetropolitan	0.84	0.65	1.19	1.31	1.44	1.84	1.32
Metropolitan—							
Less than 1,000,000	0.42	0.47	0.73	0.67	1.24	0.84	0.90
1,000,000 and over	0.46	0.44	0.54	0.77	0.68	0.75	0.86
Physician Age							
Less than 36 years	0.60	0.68	1.10	1.20	1.48	1.21	1.61
36-45 years	0.50	0.50	0.73	0.70	0.88	1.06	0.98
46-55 years	0.69	0.62	0.79	0.92	2.06	0.99	1.24
56-65 years	0.62	0.64	1.00	1.34	1.00	1.21	1.18
66 or more years	0.68	1.03	1.49	1.83	1.08	1.51	1.53

Table 40. **Mean Professional Liability Premiums (in thousands of dollars) per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	5.8	6.9	8.4	10.5	12.8	15.0	15.9
Specialty							
General/Family Practice	3.5	4.2	4.6	6.8	7.3	8.9	9.4
Internal Medicine	3.7	4.5	4.9	5.8	7.1	8.4	9.0
Surgery	9.9	11.0	13.3	16.6	21.3	24.5	26.5
Pediatrics	2.9	3.9	3.4	4.7	6.3	7.1	9.3
Obstetrics/Gynecology	10.8	14.0	19.0	23.5	29.3	35.3	35.3
Census Division							
New England	5.5	6.6	7.1	9.8	10.7	17.9	18.2
Middle Atlantic	7.4	8.9	10.4	12.9	14.9	17.0	15.5
East North Central	5.3	6.9	7.6	10.7	13.4	13.9	14.8
West North Central	5.2	4.8	8.0	10.1	13.6	15.4	19.2
South Atlantic	5.6	6.1	8.6	11.3	14.4	15.5	18.4
East South Central	4.5	5.7	6.3	9.7	10.1	12.6	13.5
West South Central	4.2	5.2	5.5	7.0	8.1	11.9	13.4
Mountain	5.5	6.2	7.5	8.1	12.0	16.1	16.9
Pacific	6.8	8.6	9.9	11.1	12.8	14.4	14.4
Type of Practice							
Solo	5.6	6.5	7.9	9.5	11.9	14.0	14.3
Non-solo	6.0	7.5	9.2	11.8	14.0	16.2	17.8
Location							
Nonmetropolitan	4.4	5.1	7.1	7.6	10.9	14.2	13.6
Metropolitan—							
Less than 1,000,000	5.9	6.5	7.8	10.1	12.3	14.1	15.6
1,000,000 and over	6.1	7.8	9.2	11.6	13.8	16.0	16.6
Physician Age							
Less than 36 years	4.6	5.2	6.2	8.7	9.5	12.0	11.0
36-45 years	6.1	7.0	8.5	10.4	13.0	14.8	16.5
46-55 years	6.4	7.7	9.4	11.6	14.8	16.1	17.0
56-65 years	5.6	7.0	8.7	10.8	12.4	16.6	16.9
66 or more years	4.5	5.9	6.5	8.5	10.3	10.7	11.4

Source: 1983-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 40 (continued). **Standard Error of the Mean Professional Liability Premiums (in thousands of dollars) per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.14	0.16	0.20	0.23	0.29	0.39	0.41
Specialty							
General/Family Practice	0.18	0.28	0.28	0.43	0.37	0.95	0.57
Internal Medicine	0.29	0.35	0.30	0.38	0.49	0.44	0.68
Surgery	0.35	0.34	0.49	0.49	0.67	0.96	0.94
Pediatrics	0.32	0.61	0.16	0.31	0.39	0.41	1.78
Obstetrics/Gynecology	0.55	0.68	0.94	1.05	1.21	1.50	1.72
Census Division							
New England	0.55	0.83	0.73	1.14	1.31	3.30	2.42
Middle Atlantic	0.44	0.50	0.60	0.66	0.81	1.03	0.85
East North Central	0.29	0.44	0.42	0.53	0.69	0.77	0.78
West North Central	0.47	0.34	0.71	0.82	0.91	1.06	2.04
South Atlantic	0.35	0.32	0.46	0.66	0.85	0.83	1.11
East South Central	0.38	0.51	0.91	0.94	0.81	0.99	1.11
West South Central	0.29	0.33	0.39	0.43	0.61	1.54	1.10
Mountain	0.47	0.52	0.64	0.65	0.95	1.38	1.37
Pacific	0.39	0.48	0.52	0.56	0.69	0.80	1.19
Type of Practice							
Solo	0.18	0.22	0.24	0.28	0.38	0.52	0.56
Non-solo	0.21	0.25	0.33	0.39	0.45	0.60	0.59
Location							
Nonmetropolitan	0.28	0.38	0.51	0.39	0.64	1.47	0.87
Metropolitan—							
Less than 1,000,000	0.20	0.21	0.29	0.34	0.43	0.56	0.59
1,000,000 and over	0.22	0.28	0.31	0.38	0.47	0.58	0.67
Physician Age							
Less than 36 years	0.37	0.38	0.47	0.58	0.56	0.74	0.72
36-45 years	0.24	0.29	0.34	0.39	0.53	0.59	0.76
46-55 years	0.30	0.33	0.44	0.49	0.63	0.69	0.78
56-65 years	0.26	0.36	0.42	0.54	0.56	1.23	0.97
66 or more years	0.35	0.63	0.54	0.70	0.93	0.84	0.92

Table 41. **Mean Expenditures (in thousands of dollars) on Medical Equipment per Self-Employed Physician, 1982-1988**[a]

	1982	1983	1984	1985	1986	1987	1988
All Physicians	5.1	5.1	5.5	5.9	7.0	6.5	6.9
Specialty							
General/Family Practice	4.3	4.3	4.8	4.8	6.9	7.2	6.3
Internal Medicine	5.8	4.9	4.8	7.0	5.8	5.1	6.3
Surgery	7.3	7.3	8.3	8.4	8.5	9.2	10.6
Pediatrics	2.4	4.4	3.3	3.9	4.7	4.1	3.9
Obstetrics/Gynecology	7.5	6.6	7.9	7.1	7.2	8.5	7.3
Census Division							
New England	4.1	5.1	2.7	4.9	3.2	5.0	5.6
Middle Atlantic	3.4	3.8	5.4	4.5	4.8	5.8	4.4
East North Central	4.2	4.9	3.9	5.4	4.9	5.0	6.2
West North Central	4.9	4.2	5.2	5.1	10.7	5.4	7.1
South Atlantic	4.6	5.9	6.0	5.6	8.9	7.5	7.5
East South Central	5.4	4.7	5.3	6.0	8.4	6.3	11.4
West South Central	7.9	7.2	9.0	6.9	8.0	6.7	7.1
Mountain	7.1	4.0	6.7	11.8	7.2	5.7	5.4
Pacific	5.1	5.1	5.4	5.6	7.9	8.5	8.5
Type of Practice							
Solo	4.8	4.8	5.0	5.6	5.5	6.0	5.7
Non-solo	5.4	5.5	6.5	6.4	9.4	7.1	8.4
Location							
Nonmetropolitan	4.9	4.7	4.5	6.3	7.1	6.5	6.3
Metropolitan—							
Less than 1,000,000	5.0	5.3	6.4	6.3	7.8	7.6	8.0
1,000,000 and over	5.2	5.0	5.0	5.4	6.1	5.4	5.9
Physician Age							
Less than 36 years	4.1	4.9	8.9	6.4	6.2	5.0	6.5
36-45 years	6.0	5.3	6.2	6.8	8.2	6.9	7.7
46-55 years	5.3	5.8	5.5	5.5	7.3	7.5	8.4
56-65 years	4.5	4.7	3.5	5.3	6.0	5.9	5.4
66 or more years	2.7	2.5	3.1	4.4	3.4	4.0	2.9

Source: 1983-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 41 (continued). **Standard Error of the Mean Expenditures (in thousands of dollars) on Medical Equipment per Self-Employed Physician, 1982-1988**[a]

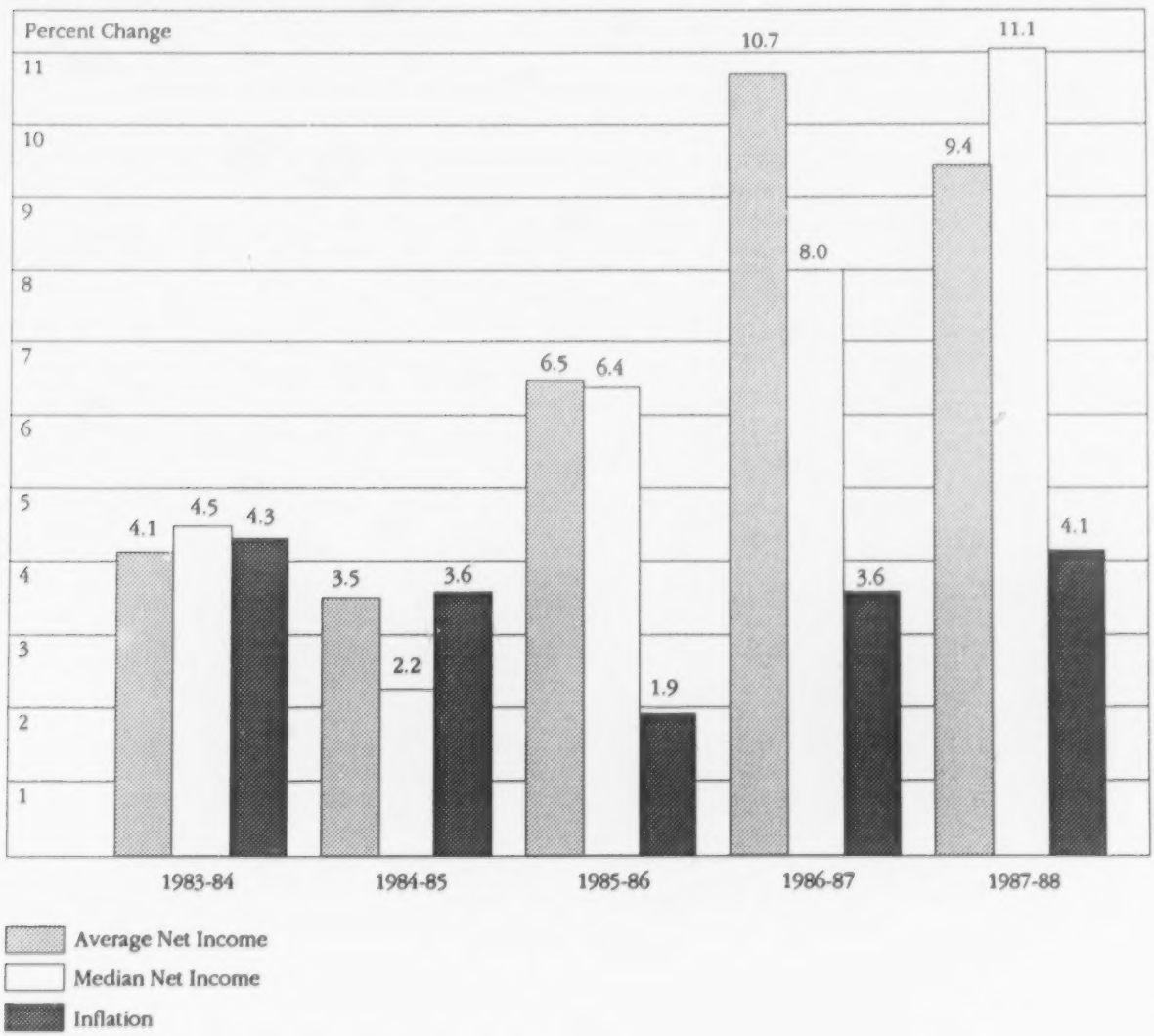
	1982	1983	1984	1985	1986	1987	1988
All Physicians	0.27	0.22	0.34	0.43	0.42	0.41	0.37
Specialty							
General/Family Practice	0.33	0.47	0.51	0.38	0.80	1.69	0.66
Internal Medicine	1.08	0.47	0.58	2.30	0.59	0.47	0.65
Surgery	0.68	0.60	0.92	0.79	0.67	0.77	0.89
Pediatrics	0.34	0.70	0.37	0.41	0.56	0.49	0.45
Obstetrics/Gynecology	1.32	0.71	1.41	0.89	1.18	1.09	0.97
Census Division							
New England	0.71	1.51	0.52	2.02	0.48	1.09	1.12
Middle Atlantic	0.44	0.36	1.00	0.65	0.50	0.77	0.55
East North Central	0.42	0.51	0.38	0.64	0.65	0.53	0.75
West North Central	0.75	0.61	0.90	0.75	2.45	0.96	0.98
South Atlantic	0.68	0.60	0.80	0.51	1.34	0.85	0.90
East South Central	0.66	0.63	0.56	0.75	1.93	0.77	2.22
West South Central	1.40	1.03	0.97	0.87	1.04	0.79	1.09
Mountain	1.37	0.54	2.96	5.31	1.30	0.95	0.79
Pacific	0.68	0.46	0.74	0.54	1.33	2.14	1.44
Type of Practice							
Solo	0.32	0.28	0.33	0.64	0.35	0.58	0.40
Non-solo	0.47	0.37	0.72	0.51	0.90	0.55	0.67
Location							
Nonmetropolitan	0.50	0.38	0.45	0.73	0.84	0.67	0.67
Metropolitan—							
Less than 1,000,000	0.33	0.31	0.69	0.53	0.71	0.81	0.65
1,000,000 and over	0.52	0.39	0.38	0.81	0.56	0.40	0.49
Physician Age							
Less than 36 years	0.53	0.52	1.95	0.78	0.71	0.67	0.89
36-45 years	0.59	0.34	0.48	1.00	0.85	0.62	0.60
46-55 years	0.45	0.51	0.70	0.68	0.79	1.10	0.99
56-65 years	0.64	0.56	0.35	0.53	0.79	0.79	0.63
66 or more years	0.29	0.37	0.64	1.50	1.05	0.61	0.53

Physician Net Income after Expenses before Taxes

Physician net income is defined to include all earnings from medical practice after expenses before taxes, including fringe benefits and contributions into deferred compensation plans. A special effort is made in the Socioeconomic Monitoring System surveys to ensure that deferred compensation is included in the net income that is reported.

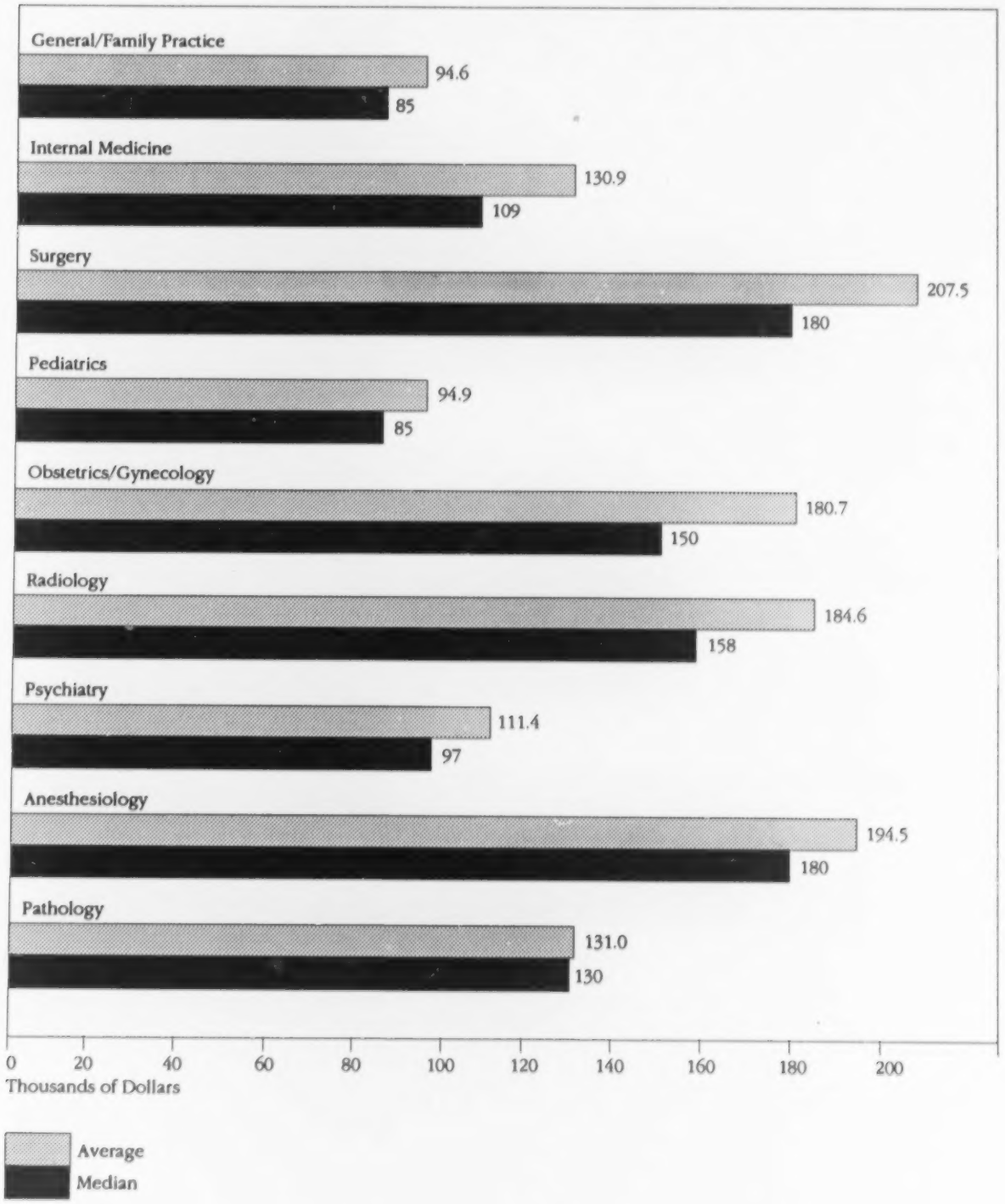
Both physician average and median net income increased at a faster rate than inflation in 1988 (see Figure 16). Although average net income reached $144,700, half of physicians earned less than $120,000. As shown in Figure 17, earnings vary by specialty. The highest earnings were among surgeons; the lowest were among general/family practitioners and pediatricians.

Figure 16. **Percent Change in Average and Median Net Income after Expenses before Taxes of All Physicians, 1983-1988**



Source: AMA Socioeconomic Monitoring System 1984-1989 core surveys.

Figure 17. **Average and Median Physician Net Income (in thousands of dollars) after Expenses before Taxes, by Specialty, 1988**



Source: AMA Socioeconomic Monitoring System 1989 core survey.

Table 42. **Mean Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	144.7	94.6	130.9	207.5	94.9	180.7	184.6	111.4	194.5	131.0
Census Division										
New England	133.0	89.5	121.1	213.2	.	.	.	114.5	.	.
Middle Atlantic	134.9	89.5	130.8	186.4	98.7	160.7	156.2	105.5	184.8	.
East North Central	147.0	93.2	120.6	246.4	93.8	193.5	174.8	110.7	170.5	136.4
West North Central	138.2	99.9	117.7	193.3	.	.	.	.	.	.
South Atlantic	156.0	94.2	149.0	203.0	104.8	208.1	197.0	134.1	205.8	.
East South Central	165.0	102.2	141.1	243.8	.	.	.	.	.	.
West South Central	160.9	98.5	152.9	224.2	85.8	202.2	.	.	.	.
Mountain	132.1	88.0	132.3	171.2	.	.	.	.	.	.
Pacific	136.2	94.3	118.2	190.0	107.2	158.3	159.3	94.7	.	.
Type of Practice										
Solo	140.5	94.2	126.6	193.4	97.4	184.4	.	111.9	188.1	.
Non-solo	147.1	94.9	133.3	218.5	93.9	178.2	186.0	110.9	196.7	132.2
Location										
Nonmetropolitan	120.9	97.5	111.3	169.1	.	.	.	.	.	.
Metropolitan—										
Less than 1,000,000	154.1	94.6	146.0	224.4	89.5	179.9	207.7	117.8	194.7	143.3
1,000,000 and over	140.7	92.2	121.3	197.3	101.2	183.6	167.3	109.5	197.7	118.3
Employment Status										
Self-employed	160.0	98.9	142.3	221.3	106.2	189.7	220.3	123.7	206.0	167.9
Employee	113.0	81.6	100.9	149.8	77.6	145.4	150.7	92.4	174.9	110.4
Physician Age										
Less than 36 years	108.0	79.0	96.9	149.2	60.3	131.5	122.2	.	201.8	.
36-45 years	152.2	99.7	138.6	236.0	97.6	220.5	185.8	120.8	196.7	101.6
46-55 years	166.8	119.4	149.0	225.7	113.0	187.1	205.7	115.8	209.5	149.1
56-65 years	140.6	91.8	131.2	192.9	96.0	157.0	187.8	97.7	191.7	.
66 or more years	102.3	67.3	86.0	120.6	.	.	.	110.5	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 42 (continued). **Standard Error of Mean Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	1.86	2.25	3.91	5.57	3.01	9.56	6.76	4.37	7.44	6.36
Census Division										
New England	6.14	8.01	12.83	18.09	.	.	.	12.29	.	.
Middle Atlantic	4.19	5.75	8.83	12.97	7.91	13.33	15.74	8.77	26.26	.
East North Central	5.05	4.85	8.24	20.09	9.68	19.36	16.56	11.64	13.40	12.30
West North Central	6.11	6.52	16.79	18.12	.	.	.	.	.	.
South Atlantic	4.40	5.73	10.24	12.21	4.99	21.77	15.34	14.52	15.83	.
East South Central	9.08	8.40	22.55	25.00	.	.	.	.	.	.
West South Central	7.41	7.61	14.49	14.72	8.44	44.60	.	.	.	.
Mountain	6.76	8.52	25.83	13.62	.	.	.	.	.	.
Pacific	4.11	7.05	8.19	12.16	7.66	16.37	12.96	6.31	.	.
Type of Practice										
Solo	3.31	3.95	6.65	7.61	6.70	20.57	.	5.19	16.94	.
Non-solo	2.24	2.54	4.84	7.86	3.33	8.57	7.10	7.24	8.19	6.40
Location										
Nonmetropolitan	4.39	4.35	14.65	13.42	.	.	.	.	.	.
Metropolitan—										
Less than 1,000,000	2.91	3.07	6.89	8.26	3.75	10.85	11.56	7.87	10.86	10.58
1,000,000 and over	2.74	4.70	4.68	8.54	4.84	15.75	8.63	5.42	10.65	7.76
Employment Status										
Self-employed	2.51	2.83	4.85	6.55	4.26	11.08	10.12	6.11	9.47	13.68
Employee	2.10	2.96	5.56	7.55	3.51	16.31	7.66	4.98	11.64	5.21
Physician Age										
Less than 36 years	3.43	3.34	7.61	10.86	3.90	15.40	11.69	.	20.68	.
36-45 years	3.38	3.52	6.23	11.66	4.15	23.67	11.64	10.75	13.93	7.81
46-55 years	4.06	7.11	8.47	10.91	8.09	14.08	12.26	8.49	12.07	12.73
56-65 years	3.97	5.19	11.09	10.23	6.98	12.66	17.12	5.50	16.14	.
66 or more years	4.41	5.01	9.40	11.19	.	.	.	11.79	.	.

Table 43. **Mean Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	89.9	97.7	104.1	108.4	112.2	119.5	132.3	144.7
Specialty								
General/Family Practice	71.5	71.4	66.9	71.6	77.9	80.3	91.5	94.6
Internal Medicine	83.4	86.9	94.6	104.2	102.0	109.4	121.8	130.9
Surgery	114.5	128.6	144.3	151.0	155.0	162.4	187.9	207.5
Pediatrics	63.5	70.5	70.8	73.7	76.2	81.8	85.3	94.9
Obstetrics/Gynecology	111.0	112.3	118.1	118.8	124.3	135.9	163.2	180.7
Radiology	108.0	133.3	144.3	139.7	144.3	168.8	180.7	184.6
Psychiatry	70.5	75.8	79.2	85.1	87.2	91.5	102.7	111.4
Anesthesiology	115.2	131.9	141.6	143.9	142.7	150.2	163.1	194.5
Census Division								
New England	83.0	80.3	84.9	87.8	106.0	107.1	110.6	133.0
Middle Atlantic	82.4	89.8	98.7	99.3	106.6	114.6	126.1	134.9
East North Central	96.4	105.2	111.1	109.8	119.3	126.6	137.6	147.0
West North Central	85.6	105.7	107.7	109.1	112.1	120.7	133.9	138.2
South Atlantic	91.4	95.9	104.5	113.6	111.2	119.6	133.8	156.0
East South Central	94.8	103.8	111.3	121.8	114.8	122.6	141.2	165.0
West South Central	97.9	118.4	122.9	122.2	124.6	129.0	140.4	160.9
Mountain	87.9	93.0	89.2	101.5	95.9	108.5	125.5	132.1
Pacific	88.8	91.0	100.5	109.2	112.0	119.0	135.4	136.2
Type of Practice								
Solo	86.1	94.0	98.7	104.8	111.0	115.5	127.8	140.5
Non-solo	93.3	100.5	108.5	111.2	113.0	122.1	135.0	147.1
Location								
Nonmetropolitan	85.9	86.9	86.9	91.3	93.3	107.7	117.9	120.9
Metropolitan—								
Less than 1,000,000	94.2	101.5	108.7	115.2	117.2	124.5	140.4	154.1
1,000,000 and over	86.9	96.7	103.8	106.3	111.6	117.5	127.9	140.7
Physician Age								
Less than 36 years	64.4	70.9	77.3	79.6	84.3	90.0	96.1	108.0
36-45 years	97.9	105.5	106.7	117.4	115.7	124.4	138.8	152.2
46-55 years	105.9	115.1	129.9	126.0	133.6	140.2	151.9	166.8
56-65 years	93.1	97.7	101.1	103.0	111.9	119.7	131.2	140.6
66 or more years	64.8	62.5	72.0	81.7	88.6	83.0	95.7	102.3

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 43 (continued). **Standard Error of the Mean Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988[a]**

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	1.50	1.22	1.38	1.29	1.37	1.41	1.88	1.86
Specialty								
General/Family Practice	3.22	1.75	1.71	1.73	1.95	2.15	2.74	2.25
Internal Medicine	3.77	2.68	3.57	3.39	3.23	3.02	3.57	3.91
Surgery	3.82	3.92	4.14	4.08	4.34	4.10	6.21	5.57
Pediatrics	4.82	2.86	3.55	2.53	2.50	2.38	2.75	3.01
Obstetrics/Gynecology	8.85	4.58	4.86	3.82	4.30	4.67	10.31	9.56
Radiology	3.70	3.84	4.75	4.76	4.55	5.23	6.25	6.76
Psychiatry	2.31	2.59	2.61	2.21	3.06	2.69	3.56	4.37
Anesthesiology	4.33	4.23	3.97	4.38	5.17	4.30	4.98	7.44
Census Division								
New England	7.54	3.39	3.60	3.45	4.94	4.81	4.23	6.14
Middle Atlantic	4.24	3.13	3.99	2.84	3.00	3.33	3.84	4.19
East North Central	4.27	3.05	3.96	3.17	4.05	4.10	6.06	5.05
West North Central	3.53	4.58	6.02	5.17	6.22	5.02	5.77	6.11
South Atlantic	3.43	2.78	3.01	3.44	3.33	3.08	3.81	4.40
East South Central	6.07	4.20	5.24	6.00	5.96	6.63	7.51	9.08
West South Central	3.90	5.23	4.48	4.58	4.56	4.87	7.65	7.41
Mountain	4.60	4.81	4.36	4.31	4.02	5.00	6.39	6.76
Pacific	3.53	2.69	2.96	3.12	3.05	3.50	4.83	4.11
Type of Practice								
Solo	2.25	1.91	2.07	2.00	2.13	2.26	3.10	3.31
Non-solo	2.01	1.57	1.84	1.67	1.79	1.81	2.37	2.24
Location								
Nonmetropolitan	2.91	2.81	2.72	3.07	3.19	4.33	4.13	4.39
Metropolitan—								
Less than 1,000,000	2.43	1.79	2.02	2.19	2.18	2.11	3.37	2.91
1,000,000 and over	2.21	1.93	2.20	1.75	2.01	2.11	2.35	2.74
Physician Age								
Less than 36 years	2.34	2.16	2.34	2.49	2.59	2.51	2.78	3.43
36-45 years	2.58	2.40	2.24	2.35	2.15	2.39	3.39	3.38
46-55 years	3.54	2.55	3.42	2.91	3.27	3.40	4.77	4.06
56-65 years	4.04	2.41	3.09	2.34	3.10	3.08	3.54	3.97
66 or more years	3.05	2.79	3.11	4.30	5.73	3.28	4.19	4.41

Table 44. **Twenty-fifth Percentile Physician Net Income (in thousands of dollars) after Expense before Taxes, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	80	60	77	117	60	100	110	74	126	85
Census Division										
New England	80	71	72	140	.	.	.	75	.	.
Middle Atlantic	76	60	76	100	53	114	100	75	98	.
East North Central	80	60	77	125	55	100	100	75	130	87
West North Central	78	69	70	110	.	.	.	.	.	.
South Atlantic	87	52	89	110	80	115	125	70	120	.
East South Central	85	70	85	133	.	.	.	.	.	.
West South Central	83	68	93	140	50	100	.	.	.	.
Mountain	70	55	51	111	.	.	.	.	.	.
Pacific	80	55	68	102	72	90	105	70	.	.
Type of Practice										
Solo	74	52	68	110	60	92	.	75	120	.
Non-solo	82	66	80	120	60	114	117	72	130	87
Location										
Nonmetropolitan	70	60	50	100	.	.	.	.	.	.
Metropolitan—										
Less than 1,000,000	84	65	85	133	60	114	125	75	127	96
1,000,000 and over	79	55	70	100	59	100	105	72	126	73
Employment Status										
Self-employed	88	60	84	122	66	115	150	80	131	137
Employee	70	60	65	94	50	80	100	70	110	75
Physician Age										
Less than 36 years	60	60	52	80	40	80	80	.	130	.
36-45 years	85	70	80	131	66	122	128	80	120	70
46-55 years	95	79	90	138	69	114	126	74	155	95
56-65 years	80	55	80	110	60	98	115	75	139	.
66 or more years	55	42	45	60	.	.	.	69	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 45. **Median Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	120	85	109	180	85	150	158	97	180	130
Census Division										
New England	110	86	103	188	.	.	.	112	.	.
Middle Atlantic	110	86	110	150	80	150	120	86	144	.
East North Central	120	86	100	190	90	150	158	91	155	140
West North Central	120	95	100	165	.	.	.	.	.	.
South Atlantic	125	80	128	180	105	172	153	100	200	.
East South Central	132	90	120	230	.	.	.	.	.	.
West South Central	130	84	130	215	70	157	.	.	.	.
Mountain	110	75	112	162	.	.	.	.	.	.
Pacific	115	83	100	158	92	144	135	99	.	.
Type of Practice										
Solo	117	83	110	175	86	150	.	100	175	.
Non-solo	120	87	108	182	84	155	159	90	180	130
Location										
Nonmetropolitan	100	87	90	145	.	.	.	.	.	.
Metropolitan—										
Less than 1,000,000	125	86	120	200	83	160	200	97	180	130
1,000,000 and over	115	80	102	159	90	140	150	99	180	100
Employment Status										
Self-employed	130	90	120	190	100	160	200	109	200	150
Employee	95	75	86	130	71	115	138	80	150	98
Physician Age										
Less than 36 years	86	72	86	121	58	115	108	.	200	.
36-45 years	120	92	110	200	88	182	153	108	177	93
46-55 years	140	100	130	200	118	160	193	100	200	140
56-65 years	118	86	108	170	95	141	158	90	180	.
66 or more years	85	68	80	120	.	.	.	90	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 46. **Seventy-fifth Percentile Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1988**[a]

		Specialty								
	All Physicians[b]	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	180	114	156	260	120	230	230	130	250	153
Census Division										
New England	155	100	140	275	.	.	.	132	.	.
Middle Atlantic	160	110	153	234	140	220	178	120	250	.
East North Central	180	110	150	290	110	260	220	120	200	168
West North Central	166	121	150	255	.	.	.	.	.	.
South Atlantic	200	115	190	250	123	290	280	175	280	.
East South Central	213	140	152	305	.	.	.	.	.	.
West South Central	210	110	173	316	105	227	.	.	.	.
Mountain	175	110	150	221	.	.	.	.	.	.
Pacific	168	112	146	240	130	203	205	112	.	.
Type of Practice										
Solo	180	120	160	242	135	220	.	145	230	.
Non-solo	180	110	156	280	120	230	230	120	250	150
Location										
Nonmetropolitan	150	120	147	209	.	.	.	.	.	.
Metropolitan—										
Less than 1,000,000	200	112	175	275	118	230	280	140	250	160
1,000,000 and over	175	110	150	250	127	230	205	130	250	140
Employment Status										
Self-employed	200	120	170	280	135	230	280	150	250	210
Employee	135	95	114	190	92	175	190	100	240	130
Physician Age										
Less than 36 years	127	90	120	195	75	154	161	.	250	.
36-45 years	185	118	170	302	118	256	230	138	260	140
46-55 years	205	148	177	280	143	220	270	145	250	196
56-65 years	178	110	150	250	136	227	230	111	240	.
66 or more years	131	82	110	150	.	.	.	134	.	.

Source: 1989 AMA Socioeconomic Monitoring System core survey. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. All data are weighted to adjust for nonresponse bias. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

b. Includes physicians in specialties not listed separately.

. Indicates fewer than 20 observations.

Table 47. **Twenty-fifth Percentile Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	50	55	60	63	65	70	74	80
Specialty								
General/Family Practice	42	45	42	45	50	53	58	60
Internal Medicine	45	50	57	66	62	67	70	77
Surgery	63	71	87	90	87	95	102	117
Pediatrics	38	43	42	46	50	55	55	60
Obstetrics/Gynecology	60	66	70	80	80	89	100	100
Radiology	65	80	90	90	89	120	110	110
Psychiatry	46	52	54	60	55	65	73	74
Anesthesiology	75	90	100	98	99	110	115	126
Census Division								
New England	48	48	51	60	62	70	70	80
Middle Atlantic	48	50	55	57	63	68	70	76
East North Central	51	60	62	70	65	74	73	80
West North Central	55	60	60	63	59	75	78	78
South Atlantic	48	55	60	62	62	68	75	87
East South Central	48	60	65	65	65	65	75	85
West South Central	55	62	70	70	70	71	75	83
Mountain	50	52	54	60	60	60	70	70
Pacific	48	53	60	68	70	70	78	80
Type of Practice								
Solo	45	51	55	60	60	65	71	74
Non-solo	53	58	63	66	65	71	75	82
Location								
Nonmetropolitan	50	54	52	50	60	66	70	70
Metropolitan—								
Less than 1,000,000	52	58	63	65	68	71	75	84
1,000,000 and over	48	54	58	65	63	70	74	79
Physician Age								
Less than 36 years	36	42	45	45	49	58	55	60
36-45 years	57	60	62	71	70	75	77	85
46-55 years	62	72	77	76	80	83	88	95
56-65 years	55	58	60	64	65	70	77	80
66 or more years	36	32	35	40	45	49	53	55

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 48. **Median Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	75	82	88	92	94	100	108	120
Specialty								
General/Family Practice	60	63	60	64	70	75	80	85
Internal Medicine	72	75	83	90	90	95	100	109
Surgery	100	110	124	128	129	141	153	180
Pediatrics	55	62	62	67	70	75	77	85
Obstetrics/Gynecology	96	107	104	110	120	127	145	150
Radiology	105	120	128	122	135	155	170	158
Psychiatry	64	68	70	80	80	82	90	97
Anesthesiology	105	120	137	145	133	149	150	180
Census Division								
New England	65	71	77	80	94	92	98	110
Middle Atlantic	70	75	80	85	90	95	100	110
East North Central	80	90	90	98	100	101	105	120
West North Central	80	90	85	90	85	105	114	120
South Atlantic	77	80	89	91	94	100	115	125
East South Central	80	90	100	100	92	100	111	132
West South Central	80	100	103	105	100	106	110	130
Mountain	74	81	80	91	85	90	110	110
Pacific	77	80	90	95	97	100	110	115
Type of Practice								
Solo	72	79	83	90	94	98	108	117
Non-solo	80	85	90	94	95	100	107	120
Location								
Nonmetropolitan	75	76	78	78	84	90	100	100
Metropolitan—								
Less than 1,000,000	79	87	92	97	100	104	110	125
1,000,000 and over	72	80	86	92	93	98	105	115
Physician Age								
Less than 36 years	55	60	65	68	72	78	80	86
36-45 years	82	90	90	100	100	103	111	120
46-55 years	90	100	110	110	115	120	128	140
56-65 years	78	85	86	92	93	100	110	118
66 or more years	55	55	60	68	73	70	80	85

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Table 49. **Seventy-fifth Percentile Physician Net Income (in thousands of dollars) after Expenses before Taxes, 1981-1988**[a]

	1981	1982	1983	1984	1985	1986	1987	1988
All Physicians	112	121	130	135	140	150	163	180
Specialty								
General/Family Practice	83	90	85	89	95	100	110	114
Internal Medicine	102	110	119	127	123	130	146	156
Surgery	141	151	176	183	196	200	230	260
Pediatrics	74	90	85	92	92	100	110	120
Obstetrics/Gynecology	134	144	150	150	159	170	195	230
Radiology	149	172	185	185	195	210	225	230
Psychiatry	87	89	95	105	105	106	116	130
Anesthesiology	145	168	174	185	170	195	200	250
Census Division								
New England	90	100	101	105	132	130	140	155
Middle Atlantic	100	115	120	125	135	140	150	160
East North Central	118	132	140	133	150	150	160	180
West North Central	110	131	135	130	139	142	162	166
South Atlantic	120	121	131	140	135	150	170	200
East South Central	130	135	141	163	140	146	180	213
West South Central	130	150	160	150	160	160	175	210
Mountain	117	117	105	125	124	140	162	175
Pacific	112	113	126	140	132	150	170	168
Type of Practice								
Solo	106	120	124	130	142	145	153	180
Non-solo	118	125	135	139	139	150	170	180
Location								
Nonmetropolitan	113	107	115	120	120	129	146	150
Metropolitan—								
Less than 1,000,000	120	130	139	144	150	159	175	200
1,000,000 and over	110	120	127	130	137	145	156	175
Physician Age								
Less than 36 years	80	90	97	100	100	110	115	127
36-45 years	123	131	135	150	142	150	170	185
46-55 years	126	144	154	155	160	175	182	205
56-65 years	111	120	121	125	140	150	165	178
66 or more years	82	79	91	100	101	100	120	131

Source: 1982-1989, AMA Socioeconomic Monitoring System core surveys. The population from which samples are drawn includes only active nonfederal patient care physicians, excluding residents.

a. Data, other than in the specialty breakdown, are based on responses from physicians in all specialties. All data are weighted to adjust for nonresponse bias. This will cause figures to differ from those reported in previous editions of this volume. See Appendix B for information on weighting and computation procedures. See Appendix D for information on definitions.

Appendices

The Design and Methodology of the AMA Socioeconomic Monitoring System
Weighting and Computation Methodology
SMS Questionnaire Summary
Definitions of Variables

Appendix A
The Design and Methodology of the AMA Socioeconomic Monitoring System[a]

The Socioeconomic Monitoring System (SMS) was developed in 1981 in response to the need of physicians and policymakers for more timely and frequent socioeconomic information on the practice of medicine than had been available in the past. This program represents an outgrowth of 20 years of AMA experience in monitoring socioeconomic aspects of medical practice. Its predecessor, the Periodic Survey of Physicians (PSP) collected similar information on an annual basis. The eighth full program year for SMS will be completed in 1989.

SMS is designed to provide periodic information on a range of characteristics of medical practice, such as physicians' earnings, expenses, work patterns, and fees. In addition, a portion of each SMS survey is devoted to collecting information regarding current issues facing physicians.

The purpose of this article is to provide a description of the current SMS program design. The first section provides an overview of program characteristics. This is followed by discussions of the SMS survey sample design, questionnaire content, field procedures, and aspects of reporting SMS results.

Overview of SMS Program Characteristics

The two SMS surveys conducted this year include an annual core survey and a supplemental survey. The core and supplemental surveys differ in the range of information collected, sample size, and the level of detail for which results are reported. The purpose of the annual core survey is to provide current data on a full range of economic and practice characteristics each year. The supplemental survey focuses on a more limited range of characteristics—those for which changes occur rapidly and those for which information is needed on a more frequent basis. The supplemental survey is also used to obtain information on topics of current policy concern. The average core survey interview lasts 25 minutes, while the supplemental survey averages 16 minutes in length.

The annual core survey obtained data from approximately 4,000 physicians; the supplemental survey obtained data from approximately 2,800 physicians. The sample size is the primary determinant of the level of disaggregation at which results can be reliably reported. Results are disaggregated into a larger number of specialties and geographical areas for the core survey than for the supplemental survey.

The 1989 core survey was fielded from March through July. The timing of the beginning of the core survey is designed to coincide with the income tax return filing deadline in order to improve the reliability of information that can be obtained on physician earnings and practice expenses for the previous year. The supplemental survey in 1988 was fielded from September through November. The field periods for the core and supplemental surveys were 21 and 12 weeks, respectively.

Compared with the two surveys in 1986, 1987, and 1988, three surveys were fielded in 1985, and four were fielded in each prior year of the SMS program. The additional surveys in previous years were similar in nature to the 1988 supplemental survey. While the number of respondents to core surveys has been approximately 4,000 every year, supplemental surveys prior to 1986 included only about 1,200 respondents each.

a. This appendix is an update of an article, prepared by Mary Lou S. White, which appeared in the 1985 edition of *Socioeconomic Characteristics of Medical Practice*.

Sample Design

The SMS surveys are designed to provide representative information on the population of all nonfederal physicians who spend the greatest proportion of their time in patient care activities. This includes both office- and hospital-based physicians, but excludes residents. Samples for SMS surveys are selected from the AMA Physician Masterfile. The Masterfile contains current and historical information on every doctor of medicine in the United States, including both members and nonmembers of the AMA. Graduates of U.S. medical schools who are temporarily practicing overseas and graduates of foreign medical schools who live in the United States are also included on the file.

Data included on the Masterfile are obtained from primary sources, including many organizations and institutions. The only information obtained directly from individual physicians concerns current professional activities and preferred mailing addresses. These data are obtained on a quadrennial basis from the entire U.S. physician population and on a monthly basis from those physicians with changes in address or professional status. These changes may be signaled by input from professional organizations, AMA mailings, or by physician correspondence.

In addition to limiting the sample to nonfederal patient care physicians who have completed their residency programs, the following exclusions are made:

- doctors of osteopathy;
- graduates of foreign medical schools who are only temporarily licensed to practice in the United States;
- physicians for whom no current address is available; and
- physicians who were sampled in SMS surveys during the last three years.

Further exclusions are made after sample selection. These include:

- physicians who spend fewer than 20 hours per week in patient care activities or are federal physicians as determined from screening questions at the beginning of each interview, and
- those who cannot be located by mail or telephone after exhaustive tracking efforts are made.

The sample design utilized for SMS is a stratified random sample with systematic selection from the listing of eligible physicians on the AMA Physician Masterfile. The strata are defined by nine major specialty groupings and ten geographical regions of approximately equal size. The specialty information used from the Masterfile reflect physician self-designated practice specialty. Systematic selection within each stratum ensures that each specialty group and region is proportionally represented in the sample. The strata definitions are shown in Table 1. Stratification is used in SMS to increase the precision of certain sample estimates and to facilitate the analysis of individual strata. Once the sample is selected, the representativeness of each stratum is reviewed to ensure that it is consistent with the stratum's population proportion.

In order to provide reliable estimates of short-term changes in certain indicators, SMS samples are designed to include a panel component. The panel consists of a portion of the sample from one SMS survey which is reinterviewed in a subsequent SMS survey. Approximately 35% of the completed interviews are conducted as reinterviews with physicians who had been initially interviewed in a similar survey in the previous year. The SMS program uses annual reinterviews of this type in order to monitor annual changes in various characteristics. Prior to 1984, much experimentation was done with the reinterview interval to optimize its usefulness. The decision to annually reinterview a portion of the sample was made because reports of annual changes provide more useful data than changes over shorter periods.

Questionnaire Content

The SMS questionnaire consists of three distinct sections:

- screening questions to verify the physician's self-designated practice specialty and eligibility for the survey;
- a main questionnaire to collect information on practice characteristics, hours worked, volume of services, fees for selected procedures, income, and expenses; and
- special topics questions to provide information on emerging socioeconomic issues.

The screening and main questionnaire portions of the survey are identical in the core and supplemen-

Table 1. **SMS Survey Sample Strata**

Specialty Strata[a]

1. General Practice, Family Practice
2. Allergy, Cardiovascular Diseases, Gastroenterology, Internal Medicine, Pulmonary Diseases
3. General Surgery, Neurosurgery, Ophthalmology, Orthopedic Surgery, Plastic Surgery, Colon and Rectal Surgery, Thoracic Surgery, Urology
4. Pediatrics, Pediatric Allergy, Pediatric Cardiology
5. Obstetrics and Gynecology
6. Radiology, Diagnostic Radiology, Therapeutic Radiology
7. Psychiatry, Child Psychiatry
8. Anesthesiology
9. Aerospace Medicine, Neurology, Occupational Medicine, Physical Medicine and Rehabilitation, General Preventive Medicine, Public Health, Dermatology, Pathology, Forensic Pathology, Other Specialty, Unspecified

State Strata

1. Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
2. New York
3. Delaware, New Jersey, Pennsylvania, West Virginia
4. District of Columbia, Georgia, Maryland, North Carolina, South Carolina, Virginia
5. Alabama, Florida, Kentucky, Mississippi, Tennessee
6. Arkansas, Louisiana, Missouri, Oklahoma, Texas
7. Indiana, Michigan, Ohio
8. Illinois, Iowa, Minnesota, Wisconsin
9. Alaska, Arizona, Colorado, Hawaii, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Oregon, Utah, Wyoming, Washington
10. California

a. The AMA Physician Masterfile classification of self-designated practice specialties is used in the specialty strata listing.

tal surveys in order to provide the basis for estimating levels and changes in economic characteristics of medical practice. However, the core survey includes an expanded main questionnaire portion to provide additional information on practice characteristics and information on annual income and expenses for the previous year. The information requested in this expanded portion remains constant from one core survey to the next.

Questions for the main questionnaire were developed from a review of past surveys and through consultation with physicians, sources within the AMA, and Mathematica Policy Research, Inc., an independent consulting firm that assisted in the development of the SMS program. Efforts were made to maintain consistency of questions with those from the PSP from which trend information has been established over a period of years. However, modifications are made where it is deemed that the desired information would be more accurate if questions were changed. In addition, questions in the SMS surveys are designed so that physicians are asked only questions that are generally relevant to their specialty. A summary of the questionnaire used in the SMS surveys upon which this volume is based is included in Appendix C.

Special topics covered in SMS surveys during the past year have included:

- physician time spent discussing fees with patients;
- third-party payments to physicians;
- patient characteristics;
- physician treatment of AIDS patients;
- professional liability; and
- physician family background.

Special topics questions are formulated and reviewed by members of AMA staff representing a broad range of activity areas. All questions that have not been used previously in SMS surveys are pretested prior to the survey fielding to evaluate the wording and ordering of questions and to determine the ability of respondents to provide the desired information.

Field Procedures

The SMS data collection plan is designed to provide reliable information within a tight time schedule. The survey is completed primarily by telephone. Telephone administration significantly reduces the time required to produce survey results and increases the response rate. The surveys are administered by independent consulting firms contracted by the AMA. Mathematica Policy Research, Inc., of Princeton, NJ, has conducted interviews for all surveys for the SMS program since the second quarter of 1983.

Field procedures developed for SMS surveys reflect a complex effort to minimize bias from nonresponse and accommodate the busy schedules of physicians through careful advance preparation and intensive follow-up efforts to complete interviews. The activities involved in this effort are described below.

Advance Letter. Two weeks prior to data collection, advance letters are sent to each physician selected to be interviewed or reinterviewed. Each letter includes a brief description of the interview, the project sponsorship, identification of the survey contractor, information that the physician will be receiving a telephone call from an interviewer on the contractor's staff, and a pledge of data confidentiality. Each letter is printed on AMA letterhead and bears the signature of James H. Sammons, M.D., executive vice president of the American Medical Association. If a letter is returned because of an insufficient address, a search is initiated to obtain updated information so the physician may be sent another letter.

When the SMS program was initiated, many physicians indicated that they could not provide certain types of information during a telephone interview without advance preparation. As a result, questionnaire summaries were designed to provide the physician with a listing of the specific medical and surgical procedures for which fees will be requested, as well as with a description of income and expense questions. Since the third-quarter 1983 survey, this insert has been enclosed with each advance letter.

Telephone Search. Because inadequate coverage is a potential problem for telephone surveys, the AMA Division of Survey and Data Resources expends considerable effort to locate sample physicians. The basic sources used in the telephone look-up include directory assistance, state and county medical societies, state licensing boards, and hospitals. If it is impossible to obtain a telephone listing for a physician from these sources, the next steps include reverifying the physician's data contained on the AMA Physician Masterfile; contacting state, county, and specialty societies; initiating traces of physicians from former addresses appearing on the Masterfile; and checking medical society directories. This ensures that the proportion of physicians in each sample stratum most accurately reflects that of the population. Approximately one week prior to data collection, the survey contractor is provided names, addresses, and telephone numbers of physicians selected from the AMA Physician Masterfile.

Interviewer Training. Two days of study-specific training in addition to general training are provided to each interviewer before working on SMS surveys. Training includes a detailed review of each question (including instruction on pronunciation of various medical terms), practice interviews, and a review of interviewing and administrative procedures. AMA staff actively participate in the training process either in person or via teleconferencing to assure that all project specifications and instructions are clearly communicated, understood, and implemented.

Table 2. **Number of Completed Interviews and Response Rates in SMS Surveys Conducted in 1988 and the 1989 Core Survey**

Survey	Number of Completed Interviews	Response Rate
Core Survey 1988	4,135	70.8%
Supplemental Survey 1988	2,914	76.4%
Core Survey 1989	4,104	72.1%

During training, the contractor actively evaluates each potential interviewer for appropriate survey skills, such as reading ability, voice quality, grasp of the material, and ability to develop rapport with physicians. The highest quality interviewers are then selected to work on the project.

Interview Process. Interviewing is conducted via a Computer Assisted Telephone Interviewing (CATI) process. This system produces a copy of the questionnaire on a computer screen. Responses to the questions are entered directly into the computer using this on-line system during the actual interview, eliminating any keypunching or separate data entry task. This reduces time schedules and maximizes quality by minimizing sources of error. In addition, this system has provided the ability to program range checks whereby a figure that is entered that exceeds the usual range automatically instructs CATI to prompt the interviewer to verify the response. This has helped reduce the number of invalid outlying responses.

A minimum of a 60% response rate for each specialty is required in order to regard an SMS survey as complete. Vigorous efforts are made to achieve the cooperation of physicians and meet this standard because of the short field period of SMS surveys. These efforts include the following:

- Appointments for interviews are scheduled at the convenience of physicians at any time 13 hours a day from Monday through Saturday.
- A toll-free number allows physicians to complete the interview at their convenience.
- An optional mail questionnaire, tailored to each specialty and type of practice, is made available to

physicians who indicate a preference for responding to the survey in writing rather than by telephone.

- Repeated callbacks (a minimum of four) to nonrespondents are made before abandoning efforts to interview the physician.
- Letters encouraging participation and addressing specific objectives are sent to physicians who initially refuse to be interviewed.
- Refusal conversion attempts are made by a select group of interviewers. A substantial number of physicians decide to grant an interview at this stage.

The actual response rates achieved on SMS surveys since the beginning of 1987 are shown in Table 2. The results indicate the success of SMS in meeting its minimum 60% response rate standard.

Confidentiality. Data are entered via the CATI system and are released only in aggregate form without any individual respondent identifying information.

Quality Control. Each interviewer's work is monitored by the contractor's supervisory staff for both production and quality. AMA staff also monitor interviews by remote telephone hook-up to ensure that a high level of quality is maintained throughout the survey. If indicated, the contractor is instructed to retain interviewers or remove interviewers from the SMS study.

AMA staff also track the SMS survey production. A detailed review is made of all sample disposition, both pending and final, on a weekly basis. As a result of this evaluation, the time schedule is reviewed and necessary recommendations are made to the contractor to enable the survey to be completed during the allotted field period.

As part of the annual SMS program review, the design and methodology are examined with an eye for identifying areas for improvement. Last year, the Center for Health Policy Research and the Division of Survey and Data Resources jointly undertook an evaluation of the impact of survey and item nonresponse rates and various potential methods for adjusting results to correct for nonresponse. The findings of that study and the consequent change in the methodology for computing statistical summary measures of SMS data are reported in Appendix B.

Reporting of SMS Results

Results obtained from SMS surveys are widely disseminated. In order to reach the physician community, results are published periodically in *AMNews*. Dissemination of information pertinent to the public is handled by the AMA Department of Public Information. *Socioeconomic Characteristics of Medical Practice* is an annual volume designed to provide more detailed results from SMS surveys than can generally be provided through other media.

Data from the SMS also serve as a basis for research on health policy issues. Analyses of such issues are disseminated through professional journals and conferences. This ensures that health policy analysts and researchers are apprised of important findings resulting from this program. Results from SMS surveys are reported at differing levels of detail depending on the nature of the media and the degree of precision of the estimates of physician characteristics deemed appropriate for the report. As indicated previously, data are never reported in any fashion that would allow identification of an individual respondent. Discussions of definitions and computation procedures employed in reporting SMS results are contained in Appendices B and D.

Conclusion

The SMS exemplifies a long-term commitment on the part of the AMA to obtain valid and reliable socioeconomic information on the practice of medicine. The SMS program complements AMA's other extensive data collection activities and its evolution represents a responsiveness to the need for the highest achievable data quality.

Appendix B
Weighting and Computation Methodology[a]

The AMA's Socioeconomic Monitoring System (SMS) is designed to measure key indicators of the changing medical practice environment in a cost-effective fashion. Cost-effectiveness demands that only a limited percentage of the physician population be contacted each year. Specifically, SMS is based on a random sample drawn from the AMA Physician Masterfile's enumeration of all nonfederal patient care physicians, excluding resident physicians. As such, SMS shares with all sample surveys the limitations that grow out of finite sample size. Thus, SMS is designed to produce reliable estimates for the ten specialty groups and nine census divisions defined in Appendix A of this volume, but is less well suited to provide estimates of the practice environment for more detailed subspecialty or geographic breakdowns. The program is designed to provide estimates of both the yearly level of each indicator as well as measures of change over time.

By design, SMS should measure the changing environment accurately but with some margin for error. There are some sources of imprecision that occur in survey work that can increase the margin for error and introduce bias into the estimates. Variations in response rates across known subpopulations can significantly reduce the ability of a sample survey to describe accurately the changing experience of the population of interest. For example, high response rates from AMA members and low response rates for nonmembers could reduce SMS's ability to represent the experience of the average physician if the experiences of these groups differ.

Even with relatively high response rates, variations in the rates may be sufficient to cause problems in reliably reporting the experiences of physicians. This appendix discusses the record of the SMS program in achieving representative samples, describes the standard statistical technique used to correct for this type of problem, and indicates the computation formulas for statistics reported in this volume.

Since its inception in late 1981, the SMS program has been continuously scrutinized and improved as our experience with this telephone survey program has increased. In 1986, a review of the problems of unit nonresponse and item nonresponse for key variables collected by SMS was undertaken.

Unit nonresponse occurs when no information at all is collected from a sampled physician because the physician is unlocatable, cannot be contacted, or refuses to be interviewed. Item nonresponse occurs when a physician agrees to be interviewed but chooses not to answer a specific item within the survey. Weighting, imputation, and regression techniques were applied to SMS data and results were compared. There are no clear criteria that permit one to choose the statistical correction most likely to represent the true population value for any indicator. In the case of the SMS variables analyzed, the results for weighting, imputation, and regression corrections for nonresponse were closer to each other than to the unweighted data traditionally reported in the *Socioeconomic Characteristics of Medical Practice*. The results suggested that the weights be based on a limited number of physician characteristics known from Masterfile data and should correct for unit nonresponse.

The results reported in this volume were obtained using a weighting scheme developed for each of the SMS core surveys. The weights were derived by first dividing the AMA Physician Masterfile population (using the year-end file from the previous year) and

a. This appendix is an update of an appendix, prepared by Sara L. Thran and William D. Marder, which appeared in the 1988 edition of *Socioeconomic Characteristics of Medical Practice*.

Table 1. **Response Rates for SMS Survey by Demographic and Practice Characteristics, 1989**

	Response Rate		Sample Size	
	Initial	Reinterview	Initial	Reinterview
All Sampled Eligible Physicians	68.5%	80.3%	3944	1745
Years since M.D.				
0-9	75.8[a]	79.5[c]	586	263
10-19	65.7	80.8	1398	583
20-29	65.7	76.9	1059	523
30-39	70.6	83.1	636	278
40 or more	73.2	90.8	265	98
Specialty				
General/Family Practice	66.3[a]	82.6[b]	611	275
Internal Medicine	63.2	76.6	834	329
Surgery	67.8	76.8	859	384
Pediatrics	77.9	81.2	290	133
Obstetrics/Gynecology	64.3	78.8	286	118
Radiology	78.6	83.6	238	116
Psychiatry	67.6	85.7	225	105
Anesthesiology	71.4	78.8	189	80
Pathology	84.9	92.9	99	42
Other	70.3	84.7	313	163
Board Certified				
Yes	68.4	80.6	2940	1263
No	68.8	79.7	1004	482
AMA Membership				
Member	73.0[a]	82.0	2041	961
Nonmember	63.7	78.3	1903	784

a. Within-category differences for the initial sample statistically significant at the p=.001 level.
b. Within-category differences for the reinterview sample statistically significant at the p=.05 level.

the survey respondents into 200 cells defined by specialty (ten categories), years since M.D. (five categories), AMA membership status (two categories), and board certification status (two categories). Unit response weights were constructed as the ratio of the proportion of physicians in the population to the proportion of SMS respondents in each cell. Second, an eligibility correction was employed. Nonfederal patient care physicians (excluding residents) are eligible for SMS. The eligibility correction divides the subset of the SMS population for which eligibility is known into 40 cells (according to years in practice, AMA membership, sex, and board certification) and calculates the proportion of physicians in each cell who are eligible. This defines the eligibility weight. The overall weight applied for a given respondent is the product of a unit response weight and an eligibility weight.

Table 1 contains information from the 1989 core survey that suggests the need for weighting. Each SMS survey has two components, an initial sample, and an annual reinterview component. Table 1 shows the response rates and sample sizes for these two groups of respondents. The reinterview component has a much higher response rate and smaller variations among relevant subpopulations than the initial sample.

The initial sample response rate of 68.5% compares

Table 2. **Mean Weights for Socioeconomic Monitoring System 1989 Core Survey**

		Specialty								
	All Physicians	GP/FP	Int Med	Surg	Ped	Ob/Gyn	Rad	Psych	Anes	Path
All Physicians	1.00	0.95	1.14	0.98	0.87	1.02	0.81	1.16	1.04	0.84
Census Division										
New England	1.05	1.01	1.19	0.98	0.91	0.93	0.77	1.20	1.01	1.26
Middle Atlantic	1.03	0.99	1.17	1.00	0.83	1.00	0.81	1.21	1.04	0.87
East North Central	0.98	0.92	1.11	0.95	0.87	1.00	0.90	1.12	1.10	0.78
West North Central	0.96	0.94	1.14	0.96	0.87	0.99	0.73	1.03	0.92	0.85
South Atlantic	0.99	0.92	1.12	0.99	0.87	1.11	0.77	1.11	1.04	0.76
East South Central	0.92	0.88	1.07	0.92	0.84	0.87	0.73	0.96	0.95	0.77
West South Central	0.99	0.97	1.11	0.97	0.90	1.08	0.87	1.20	1.01	0.75
Mountain	1.00	0.97	1.21	1.00	0.86	0.90	0.75	1.14	1.18	0.67
Pacific	1.03	1.02	1.14	1.01	0.91	1.06	0.84	1.21	1.07	0.94
Type of Practice										
Solo	1.05	0.99	1.19	1.00	0.92	1.07	0.89	1.13	1.06	0.82
Non-solo	0.97	0.92	1.11	0.96	0.86	0.99	0.81	1.19	1.04	0.84
Location										
Nonmetropolitan	0.97	0.93	1.13	0.99	0.89	1.07	0.80	1.05	0.98	0.79
Metropolitan—Less than 1,000,000	0.99	0.95	1.12	0.96	0.86	1.00	0.81	1.15	1.04	0.89
1,000,000 and over	1.02	0.98	1.16	1.00	0.89	1.04	0.82	1.17	1.05	0.79
Employment Status										
Self-employed	1.01	0.96	1.14	0.98	0.88	1.02	0.80	1.13	1.04	0.85
Employee	0.98	0.92	1.13	0.97	0.86	1.06	0.83	1.20	1.06	0.83
Physician Age										
Less than 36 years	0.83	0.73	1.02	0.70	0.81	0.79	0.67	1.20	0.90	0.75
36-45 years	1.02	0.92	1.16	1.05	0.87	1.08	0.79	1.44	1.06	0.91
46-55 years	1.02	1.01	1.15	1.00	0.98	0.97	0.80	1.13	1.01	0.75
56-65 years	1.02	1.06	1.14	0.97	0.77	1.05	0.92	1.03	1.14	0.90
66 or more years	1.00	1.02	1.16	0.92	0.92	1.30	0.95	0.92	1.12	0.84

favorably with the Health Care Financing Administration's (HCFA) Physician Practice Cost and Income Survey of 1984-1985. The HCFA survey achieved an overall response rate of 68%, with a much longer field period and much larger budget. Of greater concern are the statistically significant variations in response rates in Table 1. These subpopulations represent the dimensions that the Weighting Committee found to be historically the most troublesome in the program. The two areas of greatest concern are the variations by specialty and membership status. Lower response rates in internal medicine and surgery may reflect the "busyness" of physicians in these fields and may introduce downward biases into estimates of hours worked, patient visits, and physician's incomes. Similarly, AMA membership status may be correlated with variables of interest. Efforts have been mounted to limit these variations in response rates. Nonetheless, significant differences remain; statistical techniques have been applied to the data to adjust the estimates.

Table 2 reports the mean values for the weights described above. The subpopulations reported in Table 2 correspond to the most detailed breakdowns reported in this volume. Within these cells, the average value for the weighting variable is highest for psychiatrists who are 36-45 years old. The lowest value for the weighting variable is for radiologists who are less than 36 years old and pathologists in the Mountain Census Division.

The formula for a weighted mean $\bar{X}_w$ using the value of a weight variable w_i is:

$$\bar{X}_w = \frac{\Sigma_i w_i X_i}{n}$$

where X_i is the variable value for observation i, and n is the number of observations. It is assumed that the weights are normalized to sum to the number of observations.

The formula for a weighted standard error of the mean is:

$$\sigma \bar{X}_w = \sqrt{\frac{\Sigma_i w_i (X_i - \bar{X}_w)^2}{n\,(n-1)}}$$

Appendix C
SMS Questionnaire Summary

This summary contains questions from the 1988 Socioeconomic Monitoring System (SMS) surveys and the 1989 SMS core survey. Since the questionnaires are quite lengthy, some questions have been omitted from the summary, while others have been paraphrased. However, parts of questions that are paraphrased have been enclosed with square brackets. All questions relating to the statistics appearing in the main body of this book are included in this summary.

Screener Questions (All Surveys)

1. Our records indicate that [Masterfile specialty] is the specialty from which you derive most of your medical income. Is that correct?[a]

   (IF "YES," GO TO Q.2)

   a. What is your primary specialty?

2. During a typical week, do you provide direct patient care for 20 hours a week or more? Direct patient care includes seeing patients and performing surgery, as well as related patient services performed by anesthesiologists, radiologists, and pathologists.

3. Are you currently a full-time, salaried employee of a federal agency such as the U.S. Public Health Service, Veterans Administration, or a military service?

Practice Characteristics (1988 Core Survey)

4. Are you a full or part owner of your main practice, an employee of the practice, or an independent contractor?

5. Including yourself, how many physicians are in your main practice?

   a. How many of these physicians are full or part owners of the practice?

6. In what year did you begin medical practice after completing your undergraduate and graduate medical training?

7. In what year did you start working at your current main medical practice?

Hours and Utilization of Physician Services per Week (1988 Core Survey)

The next few questions are about the number of hours you spent working at several medical and administrative activities during your most recent complete week of practice. Do not include hours spent on call if you were not actually working.

All specialties except psychiatry, radiology, anesthesiology, and pathology

8. During your [last] complete week of practice, how many hours did you spend. . .

   a. In the office or in freestanding primary or urgent care centers seeing patients? (Include time spent in all offices if the practice includes multiple offices.)

   b. In the hospital emergency room and in outpatient clinics?

   c. In the operating, labor, or delivery room? Please include waiting time before surgery.

   d. Making hospital rounds, including visits to newborn infants? (Do not include hours spent on call if you were not actually working.)

   e. On house calls and with patients in nursing homes, convalescent homes, or other extended care facilities?

a. Masterfile specialty is information obtained from the AMA Physician Masterfile.

f. Having telephone conversations with patients or their families, consulting with other physicians, and providing other services to patients such as interpreting lab tests and x-rays?

g. In administrative activities connected with your practice and other medical facilities, as well as any other professional activities that did not involve patient care?

9. During the [number] of hours you spent in the office or in freestanding or urgent care centers [in your last complete week of practice]. . .

   How many patient visits did you personally have? Please count as one visit every time you saw a patient.

10. During the [number] hours that you spent [in your last complete week of practice] in hospital emergency rooms and [outpatient clinics]. . .

    How many patient visits did you personally have? Please count as one visit every time you saw a patient.

11. During the [number] hours that you spent seeing patients on house calls, in nursing homes, convalescent homes, and other extended care facilities. . .

    How many patient visits did you personally have? Please count as one visit every time you saw a patient.

12. During the [number] hours spent in the operating, labor, or delivery room, how many operations and deliveries did you perform? Do not include assists.

13. How many assists did you perform during [your last complete week of practice]?

14. During [your last complete week of practice], how many inpatient visits did you make during the [number] hours spent on hospital rounds? Please count as one visit every time you saw a patient.

Fees for Selected Visits (1988 Core Survey)

All specialties except psychiatry, radiology, anesthesiology, and pathology

15 Does your practice provide at least some medical care on a fee-for-service basis?

(IF "NO," GO TO Q.25)

16. What is your current usual fee for. . .

    a. An office visit with a new patient including an evaluation history, examination, and/or treatment?

    b. An office visit with an established patient including an examination, evaluation, and/or treatment for the same or new illness.

    c. A follow-up medical visit in the hospital, when you charge a separate fee for hospital visits? This visit includes an examination, evaluation, and/or treatment with a new or established patient with the same illness.

Hospital Utilization (1988 Core Survey)

All specialties except radiology, anesthesiology, and pathology

17. During your most recent complete week of practice, how many patients did you personally discharge from the hospital?

18. Among those patients that you discharged in that week, what was [their average length of stay in days]?

19. How many of the [number] patients that you discharged from the hospital that week were Medicare patients?

1988 Income, Expenses, and Weeks Practiced (1989 Core Survey)

Self-employed physicians only

20. Do you share some expenses with other physicians?

21. [In 1988, what (were your/was your share of your practice's) total tax-deductible professional expenses for the following items to the nearest $1,000?][a]

    a. Professional medical liability or malpractice insurance premiums.

    b. Office expenses, including rent or mortgage for office space, utilities, and telephone.

    c. Total nonphysician payroll expenses including fringe benefits.

a. First wording in parentheses is used for physicians in solo practice; second wording is used for physicians in non-solo practice.

d. Medical materials and supplies, such as drugs, x-ray films, and expenses for outside lab work, drugs, and other services.

e. Depreciation, leases, and rent on medical equipment. Do not include the total purchase price or the replacement value of your medical equipment. Please report only that proportion that was tax-deductible in 1988.

f. Other professional expenses, such as legal services, accounting services, office management services, professional association memberships, journals and continuing education, professional car upkeep and depreciation, and any other professional expenses [not mentioned].

All physicians

22. During 1988, how many weeks of medical practice did you miss because of . . .

    a. illness or vacation?

    b. military service or professional conferences?

    c. Altogether then you missed [a + b] weeks of practice and practiced [52-a-b] weeks. Is that correct?

    If physician started practice in 1988:

    d. You mentioned earlier that you began practicing in 1988. Excluding the [number] weeks of practice you missed in 1988 because of illness or vacation, and the [number] weeks missed because of military service or professional conferences, for how many weeks did you practice in 1988?

23. During 1988, what was your own net income from medical practice to the nearest $1,000 after expenses but before taxes? Please include all income from fees, salaries, retainers, fringe benefits, and other forms of compensation.

24. Were any contributions made into pension, profit-sharing, or deferred compensation plans for you during 1988?

    (If "YES," ASK PARTS a. AND b.)

    a. How much was contributed for you to the nearest $1,000?

    b. Did you include this amount in your [number] net income figure for 1988?

Professional Liability (1989 Core Survey)

25. Have any malpractice claims been filed against you during your career?

    (IF "YES," CONTINUE WITH THIS SECTION)

26. How many malpractice claims have been filed against you during your career?

27. How many of these [number] claims were filed during the last five years?

    (IF GREATER THAN 0, CONTINUE)

28. How many of these [number] claims were filed against you during the last twelve months?

Physician Referrals to Health Care Facilities (1989 Core Survey).

29. Excluding your own practice, hospital, HMO's, and publicly owned firms, do you or does any member of your family have an ownership or investment interest in a private facility, such as a laboratory or imaging center, that provides health care services? (This question was also asked on 1988 fall survey).

    (If "NO," GO TO END OF SURVEY)

30. At this time, in how many health care facilities do you or does a member of your immediate family have an investment or ownership interest?

31. Do you refer any of your patients to these facilities? (This question was also asked on 1988 fall survey).

32. Which of the following forms of ownership best describes the health care facility in which you or a member of your immediate family has an investment or ownership interest?

    a. Sole proprietorship. (GO TO Q.34).

    b. Joint venture with hospital.

    c. Limited partnership.

    d. General partnership.

    e. Stock company.

    f. Other.

33. In addition to you or members of your immediate family, how many other investors are there?

34. How much was your initial investment?

    a. Zero.

    b. less than $5000.

    c. $5000 to less than $10,0000

    d. $10,0000 to less than $15,000.

    e. $15,000 to less than $20,000.

    f. $20,000 or more.

35. How is your share of the profit from this investment determined: by the amount invested, by the number of patient referrals, by a combination of the amount invested and number of referrals or something else?

36. Which of the following best describes the reason you refer your patients to this facility?

    a. There is no other facility available.

    b. It is less expensive then comparable facilities.

    c. To assure a return on your investment.

    d. It provides better quality of care than other facilities.

Appendix D
Definitions of Variables

This appendix describes definitions used in reporting information from the AMA Socioeconomic Monitoring System (SMS). Changes in methodology over time relating to trends reported in the detailed tabulations in *Socioeconomic Characteristics of Medical Practice* are also discussed. Data published in this edition and the 1987 and 1988 editions are weighted (see Appendix B). Weighting the data causes the figures to differ from the unweighted information published previously in the 1983-1985 editions.

SMS survey questions referenced in this appendix may be found in Appendix C. Tables referred to are those contained in the detailed tabulations.

Sample Population

The population from which samples are drawn for SMS surveys includes all active nonfederal office-based and hospital-based physicians as defined by the AMA Physician Masterfile.[a] Residents are not included in the surveys.

Specialty

Specialty classifications used in reporting SMS data are shown in Table 1. Specialty is determined from responses to question 1 in SMS surveys.

Census Region and Division

States included in each census region and division are shown in Table 2. The state in which each physician was located is identified from the AMA Physician Masterfile.

Type of Practice

Physicians in solo and non-solo practices are distinguished in SMS surveys on the basis of responses to question 5. In the few cases where the number of physicians is not known, the practices are characterized as non-solo.

Location

The location classification groups physicians into nonmetropolitan areas, metropolitan areas with a population less than 1 million persons, and metropolitan areas with a population of 1 million or more persons. This classification was made on the basis of the demographic county classification contained on the AMA Physician Masterfile. Metropolitan areas include counties within Standard Metropolitan Statistical Areas (SMSAs) and counties outside SMSAs with populations over 50,000.

Employment Status

Employment status is determined from the response to question 4. Physicians who respond that they are full or part owners of their main medical practice are deemed to be self-employed, while the remainder are identified as employee physicians. In the 1987 and 1988 SMS core survey, physicians were coded as self-employed, employee, or independent contractor. Independent contractors were classified as employees for the purposes of the employment status breakouts reported here. In the 1982 SMS core survey, the following question was used in place of question 4: "In your main medical practice, are you: (a) self-employed, (b) employed by a private practice, (c) employed by a hospital, or (d) other?" The

a. Classifications used in the AMA Physician Masterfile are defined in G. Roback, et al., *Physician Characteristics and Distribution in the U.S.*, 1987 edition, American Medical Association, 1988.

Table 1. **SMS Survey Specialty Classifications**

SMS Specialty Classification	AMA Physician Masterfile Specialties
General/Family Practice	
General/Family Practice	General Practice, Family Practice
Medical Specialties	
Internal Medicine	Allergy, Cardiovascular Diseases, Gastroenterology, Internal Medicine, Pulmonary Diseases
Pediatrics	Pediatrics, Pediatric Allergy, Pediatric Cardiology
Surgical Specialties	
Surgery	General Surgery, Neurosurgery, Ophthalmology, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Colon and Rectal Surgery, Thoracic Surgery, Urology
Obstetrics/Gynecology	Obstetrics and Gynecology
Other Specialties	
Radiology	Radiology, Diagnostic Radiology, Therapeutic Radiology
Psychiatry	Psychiatry, Child Psychiatry
Anesthesiology	Anesthesiology
Pathology	Forensic Pathology, Pathology
Other	Aerospace Medicine, Neurology, Occupational Medicine, Physical Medicine and Rehabilitation, General Preventive Medicine, Public Health, Dermatology, Emergency Medicine, Other Specialty, Unspecified.

few physicians for whom employment status was not available were classified as employees.

Age

The age of each physician SMS surveys was determined from birthdate information on the AMA Physician Masterfile.

Weeks Practiced per Year (Tables 1 and 2)

Weeks practiced in 1988 was calculated with responses to questions 22a, 22b, and 22c. However, if the physician began practice in 1988, weeks practiced was calculated from responses to 22a, 22b, and 22d. By using this series of questions, a more accurate figure on weeks worked was obtained from physicians that began practice in 1988. Weeks practiced in 1987 was asked using the same questions as in 1988.

Weeks practiced in 1986 was calculated with responses to questions 22a and 22b on the 1987 SMS core survey and verified with question 22c. Question 22c corrected an upward bias in the computational procedure for physicians in their first year of practice. Weeks practiced in 1985 was calculated with responses to questions 22a and 22b on the 1986 SMS core survey. Prior to the 1986 SMS core survey, the following question was asked:

How many weeks did you practice in 198_? Please do not include vacations, sick time, military service, or other similar absences from practice.

Weeks practiced in 1985 and 1986 was calculated as 52 minus the sum of the number of weeks entered in parts a and b of question 22.

Hours in Professional Activities per Week (Table 3 and 4)

Professional activities includes all patient care activities, administrative activities connected with medical practice, and other professional activities that do not involve patient care, such as medical staff functions,

Table 2. **Census Region and Division Definitions**

Census Region and Division	States
Northeast	
New England	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont
Middle Atlantic	New Jersey, New York, Pennsylvania
North Central	
East North Central	Illinois, Indiana, Michigan, Ohio,Wisconsin
West North Central	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota
South	
South Atlantic	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia
East South Central	Alabama, Kentucky, Mississippi, Tennessee
West South Central	Arkansas, Louisiana, Oklahoma, Texas
West	
Mountain	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming
Pacific	Alaska, California, Hawaii, Oregon, Washington

teaching, and research. Hours per week in professional activities in 1988 is based on "total hours" as calculated by the sum of the responses to the individual parts of question 8 in the 1988 SMS core survey. Follow-up probes detailing the scope of the individual parts of these questions were used to avoid double counting of hours.

Hours in Patient Care Activities per Week (Tables 5 and 6)

Patient care activities include direct patient care and activities related to patient care, such as interpreting laboratory tests and x-rays and consulting with other physicians. Hours per week in patient care activities from 1982 to 1988 is based on the sum of the responses to parts a-f of question 8 in the SMS core surveys.

Hours in Direct Patient Care Activities per Week (Tables 7 and 8)

Direct patient care activities include seeing patients in the office, on hospital rounds, in surgery, and in other settings. Hours per week in direct patient care activities for 1982 to 1988 was determined from the sum of responses to parts a-e of question 8 on the 1982 through 1988 SMS core surveys. Physicians in psychiatry, radiology, anesthesiology, and pathology are not reflected in computations of direct patient care hours in Tables 7 and 8.

Office Hours and Hours on Hospital Rounds per Week (Tables 9-12)

Office hours and hours on hospital rounds per week from 1982 to 1988 are based on responses to questions 8a and 8d respectively in the SMS core surveys. Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked questions 8a and 8d and are, therefore, not reflected in the data reported in Tables 9-12.

Hours in Surgery per Week (Tables 13 and 14)

Hours in surgery per week in 1988 is based on responses to question 8c in the 1987 SMS core survey. Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked question 8c and are,

therefore, not reflected in the data reported in Tables 13 and 14. Hours in surgery per week prior to 1988 in Table 14 are based on responses to a similar question on the earlier SMS core surveys.

Total Patient Visits per Week (Tables 15 and 16)

Total patient visits includes visits in the office, on hospital rounds, in hospital emergency rooms and outpatient clinics, and in all other settings. Total patient visits per week in 1988 is based on the sum of responses to questions 9-14 on the 1988 SMS core surveys. Total patient visits per week in 1986 and 1987 was derived from similar questions on the 1986 and 1987 SMS core surveys. Total patient visits per week from 1982 to 1985 is based on responses to the following question:

During [your last complete week of practice], how many . . .

a. Patients did you personally see in the office, including outpatient surgery performed in the office?

b. Operations, deliveries, and assists did you perform in the hospital?

c. Inpatient visits did you make on hospital rounds? Please count as one visit every time you saw a patient.

d. Patients did you see in the emergency room and in outpatient clinics?

e. Patients did you see on house calls or in nursing homes, convalescent homes, or extended care facilities?

Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked either series of questions and are, therefore, not reflected in the data for 1982 to 1988 in Tables 15 and 16.

Office Visits and Visits on Hospital Rounds per Week (Tables 17-20)

Office visits and visits on hospital rounds per week in 1988 are based on responses to questions 9 and 14 respectively in the 1988 SMS core survey. Office visits and visits on hospital rounds per week for 1986 and 1987 were obtained from similar questions on the 1986 and 1987 SMS core surveys. Office visits and visits on hospital rounds per week in the years 1982 to 1985 were based on responses to the question:

During [your last complete week of practice], how many. . .

a. Patients did you personally see in the office, including outpatient surgery performed in the office?

b. Inpatient visits did you make on hospital rounds? Please count as one visit every time you saw a patient.

Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked either set of questions and are, therefore, not reflected in the data in Tables 17-20.

Surgical Procedures per Week (Tables 21 and 22)

Surgical procedures per week in 1988 is based on responses to questions 12 and 13 in the 1988 SMS core survey. The identical questions were used on the 1986 and 1987 SMS core surveys to obtain surgical procedures per week in 1986 and 1987. Surgical procedures per week in 1982 to 1985 were based on responses to the question: "During [your last complete week of practice], how many operations, deliveries, and assists did you perform in the hospital?" Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked either set of questions and are, therefore, not reflected in the data reported in Table 22.

Hospital Utilization (Tables 23-26)

Data on patients discharged from the hospital per week and the length of stay of patients discharged in the years 1982 to 1988 are based on responses to questions 17 and 18 on the respective SMS core surveys. Physicians in radiology, anesthesiology, and pathology were not asked questions 17 and 18 and are, therefore, not reflected in the data in Tables 23-26.

Fees (Tables 27-32)

Fees for office visits with new patients, office visits with established patients, and follow-up hospital visits between 1982 and 1988 were obtained in the SMS core surveys from responses to questions 16a, 16b, and 16c respectively. Physicians in psychiatry, radiology, anesthesiology, and pathology were not asked question 16 and are, therefore, not reflected in the data in Tables 27-32. In the 1983 and 1984 edi-

tions, the fee reported by each physician was weighted by the frequency with which the physician had each type of visit in computing average fees. This weighted average method was not used in the 1985, 1986, 1987, or 1988 editions. In 1985 and 1986, the mean physician fee was computed as the simple average of responses. In the 1987, 1988, and 1989 editions, the mean physician fee was computed as a simple average of responses weighted for survey nonresponse (see Appendix B). The mean fees reported for all years in Tables 28, 30, and 32 have also been computed in the latter fashion so as to provide consistency among the information reported.

Professional Expenses (Tables 33-41)

Professional expense information reported in Tables 33-41 refers to tax-deductible professional expenses from medical practice. Data on total professional expenses for 1988 are obtained either as the sum of the responses to parts a-e of question 21 in the 1989 SMS core survey or, in the event any of these responses is missing, as the response to the question, "In 1988, what were your total tax-deductible professional expenses from medical practice to the nearest $1,000? Do not include contributions made for you into deferred compensation plans." Data on professional expenses for 1981 to 1987 in Tables 34, 36, and 37-41 are based on responses to similar questions from the 1982 to 1988 SMS core surveys. The 1987 SMS survey, however, also asked a separate question on 1986 physician payroll expenses. This question was not asked on any other surveys. On other surveys, physician payroll expenses are included in the "Other Expenses" category. Data relating to professional expenses from the SMS surveys are based only on self-employed physicians.

Net Income after Expenses before Taxes (Tables 42-49)

Physician net income is defined to include all earnings from medical practice after expenses but before taxes, including fringe benefits and contributions made into deferred compensation plans. Net income in 1988 was determined in the 1989 SMS core survey from responses to question 23.

In addition, question 24 was included as a probe to ensure that deferred compensation plan contributions were fully represented in net income. If the physician responded "no" to question 24b, the response given to question 24a was added to the response to question 24 to obtain net income. Similar questions in the 1982 to 1988 SMS core surveys were used to obtain information on net income for 1981 to 1987, respectively.

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